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ABSTRACT

This report contains the following papers presented at the conference: 1) "Evaluating the Needs of Teacher Education in Southeast Asia"; 2) "Studies in Microteaching: A Pedagogical Model"; 3) "Teacher Training in Indonesia as a National Problem"; 4) "Secondary School Teacher Education in Indonesia"; 5) "Curriculum Evaluation in Teacher Education in Malaysia"; 6) "Evaluation of Teacher Education Curricula"; 7) "Curriculum Evaluation in Teacher Education in the Philippines"; 8) "Objectives in Teacher Education: A Pre-Evaluation Task"; 9) "Relevance of Piagetian Theory to the Evaluation of Teacher Education Curricula"; 10) "Curriculum Evaluation in Teacher Education in Singapore"; 11) "Curriculum Evaluation in Teacher Education in Thailand." In addition there are short reports on five panel discussions and three group discussions. The three group discussions focused on the education of language teachers, science teachers, and social studies teachers, respectively. (RT)

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CURRICULUM EVALUATION IN TEACHER EDUCATION IN S.E.ASIA

AUGUST 3–7, 1970

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PROCEEDINGS OF THE CONFERENCE
ORGANIZED BY THE INTERNATIONAL COUNCIL
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AND THE FACULTY OF EDUCATION,
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Editor: Francis Wong

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ADDRESS BY DR. SIM WONG KOOI
DEAN, F.E.U.M.

Yang Berbahagia, Tuan Haji Hamdan bin Sheikh Tahir, Chief Education Advisor, Dr. Frank Klassen, Executive Director of I.C.E.T., distinguished participants, ladies and gentlemen,

We are indeed sorry to announce that the Acting Minister of Education, Yang Berhormat Tan Sri Ghazali has suddenly been taken ill in Ipoh and is unable to be with us this afternoon. We are however fortunate to have the Chief Education Advisor, Yang Berbahagia Tuan Haji Hamdan, stand in on behalf of the Honourable Minister in addressing us and in officiating the Opening of the Conference. We are glad too that our rather nebulous theme for the Conference has apparently not deterred too many from attending. It is a great pleasure and honour for me to extend to you, on behalf of the Faculty of Education, a warm welcome and to express our sincere thanks for your interest in this our first International Conference organised jointly by the Faculty and the International Council for Education on Teaching, or I.C.E.T.

Prior to this day I have been approached by quite a few people who seemed to be intrigued by the title of the Conference, for, whereas the terms "curriculum evaluation" and "teacher education" have attained popular currency, their juxtaposition appears to be no less strange than the thought of the big powers signing a peace treaty. In fact, each of the terms "curriculum," "evaluation," "teacher" and "education" have assumed protean meanings and it is to be hoped that their conjoint relationship would not produce a kind of "rojak" that is not readily or clearly explicable. In this Conference, there will be opportunities to explore the problems of curriculum evaluation in teacher education from a variety of angles. In the first place, it is hoped that the theoretical papers would be suggestive of models or paradigms that may be applicable in the South-East Asian context. The country case reports should provide insights into attempts at evaluating teacher education curricula that are perhaps more relevant to our individual needs, since we share more similar constraints than with the Western world, where this area of research and development is probably much better documented.

The panel discussions will consider the topics from five different perspectives – comparative, development, pedagogical, psychological and sociological–, which correspond to the five Divisions of the Faculty of Education. By having panelists from various sectors associated either directly or indirectly with teacher education, including student representatives, it is hoped that, although some overlaps are inevitable, each discussion session would attain a distinctive character, thereby providing some evidence for the viability of our divisional sturcture. We have also found it expedient to group the various disciplines into larger areas, such as language, science and social studies. It is therefore to be hoped that the group discussions on the evaluation of language, science and social studies teacher education curricula would be meaningful and interesting. Above all, it is to be hoped that some clarity concerning what we mean by "Curriculum evaluation in teacher education" would emerge from all our deliberations.

Those of us who are teacher educators have far too long advocated the need to evaluate the curricula in schools without seriously tidying up our own house so to speak. Perhaps we need to think through more thoroughly *why* and *how* we are doing *what* we are doing. For illustrative purposes, let us take a number of so-called three-stage phenomena that are likely to be included in curriculum evaluation. First and foremost, consider the systems analytical specification into (1) clarifying objectives in terms of terminal behaviours, (2) specifying pedagogical procedures and conditions appropriate to the attainment of these objectives, and (3) assessing the extent to which these objectives have been attained. Some of the questions we need to ask ourselves are: Are

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we clear about what we expect our students to be able to do as a result of following our courses of study? Within the usual time and other limitations, what do we consider to be crucial and what do we consider of secondary importance that could without serious repercussions be given only scant treatment? Are we sure that the pedagogical techniques we employ are effective and efficient? Are we really producing a change and, if so, is it for the better? Is it a mythical assumption that the students we have at teacher education institutions are more independent and mature and hence capable of benefitting more from lectures than from individual instruction? Have we been systematically and continuously evaluating what we have been able to accomplish? Against what criteria?

Another three-stage phenomenon consists of the three types of evaluation which I have called presage, process and product evaluations. By *presage evaluation,* I mean the anticipatory processes of examining existing curricular practices for strengths and weaknesses and of scrutinising available new curricula or proposals and plans for new curricula to see the extent to which the new curricula would preserve the strengths or introduce new strengths and diminish the weaknesses of existing curricula. This preliminary evaluation may involve the formulation or reformulation of goals and priorities and of deciding whether the cost of a change in curriculum is justifiable or not in terms of the likely benefits that would accrue. By *process evaluation,* I am referring to the collection of information for purposes of improving the curriculum which is in the process of being tried out. The feedback obtained will be used to revise the materials and methods by adapting them to the needs and predispositions of the users (e.g. teachers and students). *Product evaluation* would refer to the gathering of information about a particular package of materials and methods so as to guide potential users in making decision regarding its possible adoption and effective use. The last two types of evaluation correspond to what Michael Soriven refers to as "formative" and "sumative" evaluations respectively. There have been needless arguments over the relative merits of these types of evaluation in the literature, for it is conceivable that the three types of evaluation could be envisaged as three phases of evaluation over time with one type of evaluation assuming greater importance duirng certain times in the cyclic process. The question then is not whether one type of evaluation is more important but rather when and how we are employing such types of evaluation.

Finally, let us consider the three-stage phenomenon suggested by Robert Stake who distinguishes between *antecedent, transaction,* and *outcome* data. An *antecedent* is any condition existing prior to being exposed to the curriculum, and includes student and teacher characteristics, curricular materials, environmental conditions, etc. *Transactions* are the countless encounters among students, teachers, parents, etc. which comprise the process of education. Examples are the sequences of events, classroom interactions, etc. Finally, *outcomes* are the consequences of exposure to the curriculum– short-term and long-term, cognitive and conative, personal and social. Apart from traditional outcomes like student abilities, attainments, attitudes and aspirations, other examples include effects on teachers and institutional effects. In many situations, the teacher education institution exerts little, or no, control over the antecedent or outcome data – in Malaysia at least there is very little control over selection and the supervision of students once they are out of our grasp, so to speak. The question then is whether we should continue to stand idly by and focus our attention on obtaining transactions data only? Apart from agitation for some say in selection and future supervision, should we not actively carry out predictive studies based on input data and follow-up studies based on the output data?

It has been customary in conferences to raise questions and porvide no answers. This has not been my intent in posing some of the questions earlier on. In throwing off these questions I was hoping to highlight the crucial importance of a comprehensive, concerted and coordinated attack on the problem of curriculum evaluation in teacher education. I am hopeful that this Conference might offer some tangible solutions. Perhaps at this stage, these "solutions" may take the form of classification of concepts and delineation of directions for future research. Perhaps too, it may be possible to envisage the setting up a South-East Asian Centre for Research and Evaluation in Teacher Education.

The associated acronym for the Centre (SEACRETE) may be more fortuitous than we think, for arising from research and evaluation in teacher education, we must be equally committed to shedding redundancy in our programmes in a continuous and systematic fashion. If and when we do set up such a Centre, it should also represent our willingness to change and to bring about change. It is true that it is difficult and most unwise to try to shed entirely our cultural heritage or colonial past so that in forging ahead we should take cognisance of history and the lessons of history. In this respect, we in South-East Asia have a great deal to learn from one another. For one thing, since our audience is generally less technical or sophisticated than that which obtains in Western countries, special care needs to be exercised in exploring the need for, and the findings from, curriculum evaluation in teacher edcuation. Aside from having to reduce the extent of jargonising, we may find it necessary to use less refined but more readily understood measures than to employ highly reliable and valid techniques that are meaningless to the decision-maker. More important, arising from the increasing tendency for us to be infused or suffused with new ideas from various sources, is the need to focus attention on a problem which has so aptly been expressed by Ralph Tyler in his statement:

> "The accelerating development of research in the area of educational evaluation has created a collection of concepts, facts, generalisations, and research instruments and methods that represent many inconsistencies and contradictions because new problems, new conditions, and new assumptions are introduced without reviewing the changes they create in the relevance and logic of the older structure."

Now that I have given you an overdose of wishful thinking, may I call upon Tuan Haji Hamdan, the Chief Education Advisor, to prescribe a more down-to-earth remedy and to delcare open the Conference.

Thank you.

ADDRESS BY DR. FRANK H. KLASSEN, EXECUTIVE DIRECTOR, ICET.

Distinguished speakers, guests and participants, on behalf of the President and the Executive Committee of the International Council on Education for Teaching, I would like to welcome you to this Southeast Asian regional conference on Teacher Education. I think this conference comes at a rather significant time in history and deals with the topic that is crucial to the success of future educational endeavours here and in other parts of the world. The significance in historical terms is because of the state of dislocation characteristic of many of man's social institutions at this time and the compression of problems at a time when communication and transportation put each man in the backyard of his neighbour. And the events of the day in Bangkok or in Kuala Lumpur or in Chicago immediately have reverberations in Washington, in Bonn and in Cairo. And all of this has in the opinion of one writer created a new international neurosis known as "future shock" and this he says is "the dizzying disorientation brought on by the premature arrival of the future" and that is what we all represent in non-anatomical terms. Although culture shock is a very common experience for many of us in this role, future shock may become "the most important disease of tomorrow", and quite seriously has brought on a range of "social change that has become so fast to be impossible for most human beings to assimilate." I live today, three hours ago because I took a plane that happened to cross a date-line and so I stand before you ready to brush my teeth in the morning or as I am now speaking in the late afternoon.

Well, this "malaise, mass neurosis, irrationality and (the much more serious) free-floating violence already apparent in contemporary life are merely a foretaste of what may lie ahead unless we come to understand it and to treat this disease." It has been said that no longer can we be content with democracy but we have to be content with adhocracy, to be able to switch and change and shift and be prepared for the next step, to cope with pressures which we do not and are not able to foretell. Now, one of these social institutions, education, faces constant interrogation and analysis by all elements of society. I know of no social system that has so many adherents and so many critics. Faculty, the students, the parents and the media, the newspapers, the man-in-the-street, everyone, has an interest, everyone is an expert, and everyone is a critic. And who stands in the middle? The teacher, trying to serve as a bridge, as a link, between a number of very important sections and values in our society.

Now critics are saying in words and in deeds that the last place any of us can expect to learn anything about the realities of today is in the classroom. It is very difficult to learn about the reality of the contemporary world in a rectangular box. It is very difficult to prepare a teacher who is expected to go out and to prepare the children of our nation and your nation to face future shock with the prescribed curriculum and a prescribed space in which to operate. Now, if this is the case, and it sounds like a rather pessimistic view, most of us here today should be engaged in seeking other occupations and maybe after the conference there will be a great exodus from this profession. However the pessimism that I have expressed must be countered, I think, by a more realistic appraisal of the skills and the concepts that are relevant, to be talked and to be experienced, in this nuclear space-age. Future shock has to be countered by present creativity. This conference is dedicated to just such an objective, present creativity directed towards the education of teachers who are the vanguard of the forces confronting the future. When one thinks that the teacher is expected after three or four years of education to represent the profession and to follow its mandates one can think of no other profession that demands as much of an individual. Rarely would we place a scalpel into the hands of a person who had studied only for as little as a teacher has and yet we place in the hands of the teacher something far more deadly, i.e. the brains and the minds and the future of everyone who walks outside.

Now the necessity for looking at the curriculum. As I listen to the curriculum being defined I hear it as being far more than the syllabus, far more than the course but that whole environment in which the student and the teacher and the educational system operate and hopefully flourish. The necessity for such a conference then stems from this pivotal position of the teaching profession and those who profess to educate the teacher. Because the profession stands as a rather crucial link – and it stands as a link between several institutions of higher education and the schools, the University of Malaya the University of Chulalongkong or Washington University – their social relevance is transmitted through the teacher to society and the school. The teacher serves as the link between higher education and the school. He also serves as a link between the schools and the public. The parents and those who have aspirations for their children and the various sectors of the public and the economy look to the schools to train people for them, and this school, in this particular conference here stands as a further link, as a link between the public of any nation and the public of other nations. The extension of education from the University to the school to the public to the rest of the world is the objective of ICET, the International Council on Education for Teaching, formed some 17 years ago. We have found that experiences and porblems are common, that pollution whether it is of the mind or containers is something that one finds everywhere and that the solutions in many cases can also be common even if viewed from different perspectives.

The International Council on Education for Teaching is but a forum which enables those who are concerned with the preparation of teachers to come together to view the problem, to examine it, and if possible to arrive at solutions. Co-operative activity is a very important aspect of this organization. We have represented in this conference today participants from Singapore, Thailand, Malaysia, the Philippines, Indonesia, the United States and if I have forgotten any others, you must excuse me; let us say Southeast Asia. This kind of co-operative shared activity is one basis for looking at these common problems. The focus happens to be curriculum evaluation in teacher education and it is hoped that in the future the International Council on Education for Teaching can serve to bring about forums of this type on other problems which affect the preparation of teaching personnel. It hopes that it can transcend some of the national and local concerns and to provide an international look at problems. I would hope that national agencies for teacher education would be formed so that ICET could represent the international concerns, the cooperative concerns and the common concerns.

The executive committee and I speaking for them at this time wish the conferees the best of success. To the University of Malaya our thanks for providing the planning and the thinking for this conference.

Thank you.

ADDRESS BY Y.B. TAN SRI HAJI MOHD. GHAZALI JAWI, ACTING MINISTER OF EDUCATION, MALAYSIA[1]

Ladies and Gentlemen,

I feel greatly honoured to have been invited to participate in this opening ceremony. If my information is correct this is the first International Conference on curriculum evaluation in teacher education to be held in Kuala Lumpur with the focus on problems pertaining to teacher-education in the South-East Asian region.

I feel this conference is most timely because, during the last decade or two, the main concern in most of the countries in this region, had been to cope with the great increase in the demand for education, in providing more schools and more teachers. In Malaysia, for instance, whilst our efforts and energies were directed towards the quantitative improvement of education we had barely time to give thought to the qualitative improvement of education.

To my mind the quality of education depends to a great extent on the quality of teachers that we have. The most up-to-date curricula or the most modern school buildings will not be of much use if the teachers, who teach the curricula, and the staff of the school are not of the desired quality. For poor teachers will produce poor students who in turn will become poor teachers, and so the vicious circle goes on and on.

The responsibility of the teacher to-day is more than just furnishing the children with facts. If this were the only responsibility expected of teachers than perhaps the use of teaching machines would be more effective and more economical. However, teachers are responsible to society for preparing the future members of society to live a full and meaningful life. To this end, teachers have the duty of providing the proper experiences and environment which will help towards the development of those attitudes and skills essential for the attainment of the objectives of education in any particular society. In this context, I feel teachers will have to promote in the children the belief of the worth of the individual. This respect of the individual is, I believe, the basic principle of democracy. Although the worth of the individual must be respected and the growth of the individual must be encouraged, it is just as important that these individuals learn the art of co-operative living. This then is the second task which I think the modern teacher has to accomplish. Thirdly, the teacher's task will be to help the children to develop a proper sense of values because, "Values are the guides men live by" Fourthly, I believe teachers must foster in the children the skill of evaluating what they learn or do. Evaluation is a lifelong process and its importance can never be over-emphasised.

I am sure you all in your deliberations during the next few days will be able to identify many more skills and attitudes which teachers need to know and be able to impart, and which as teacher educators, you will want to see incorporated into the curriculum for teacher education. My fear, however, is that often what is conceived at your level, the academic level, seldom seeps through to the other levels. I would urge for a greater degree of collaboration and co-operation between the Universities and the other agencies responsible for teacher-education. Only by such close co-operation, by frequent exchanges of information can one expect meaningful changes to be made. In Malaysia for instance, teacher-education is carried out both by the Ministry of Education and the University of Malaya, the former concerned with the training of teachers for the lower secondary and primary schools and the latter with teachers for the upper secondary schools. Though each is performing a definite role in teacher education yet their roles are not conflicting but arecomplementary to one another. In addition to the role, I think the University of Malaya can also play a role in improving the quality of teacher-education. For one thing, it can be the arbiter of standards. For another, with its expertise, it could for example:-

(i) carry out, jointly with the relevant agencies of the Ministry of Education, researches on common problem areas;

(ii) conduct in-service courses for the up-grading of teachers and disseminate information on teacher-education through its publications.

By these actions I believe the University can contribute a great deal towards improving the quality of teacher-education.

During the conference you will have the opportunity to listen to, and to discuss not only theoretical papers prepared by eminent scholars in teacher-eudcation but also actual country reports, which I am sure will throw light on the experiences of the respective countries in this field of teacher-education. By sharing your experiences and exchanging information and ideas, I am certain you will be able to avoid pitfalls and improve your future plans. Perhaps I may even venture to say that of one of the outcomes of the conference will be to cause us to have another good look at our own teacher education programme and if necessary or desirable improvements should be made.

An international conference of this nature requires a great deal of planning and effort, and in this regard I wish to congratulate those who have been responsible for bringing together all the eminent teacher-educators from the various countries in the South-east Asian region to Kuala Lumpur to share their thoughts and experiences. In particular, I congratulate the International Council on Education for Teacher (IECT) and the Faculty of Education, University of Malaya, the co-organisers of the Conferences. I sincerely wish that you all will have a very successful conference.

Ladies and Gentlemen, it is with the greatest of pleasure that I declare the conference open.

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1 Speech read by Tuan Haji Hamdan bin Sheikh Tahir, Ketua Pengarah Pelajaran, Malaysia.

EVALUATING THE NEEDS OF TEACHER EDUCATION IN SOUTH-EAST ASIA

Dr. Ruth. H.K. Wong,

Director of Research,
Ministry of Education, Singapore.

EDITORIAL NOTE:

> Since the above paper was unavailable, only a report of the speech delivered by Dr. Wong, who will be referred to as "RW", will be given in what follows. Should there be gross errors in reporting, we tender our apologies.

RW began by drawing a distinction between evaluating the needs *of* teacher education and evaluating the needs *for* teacher education. To her, education *for* would direct attention on the demand for education and the problem of quantitative expansion, but the needs *of* teacher education are more particularly related to the supply of teacher education and its qualitative output. RW then pointed out that the paper would focus on the needs *of* teacher education.

Borrowing from the systems analytical model, she delineated three stages, namely input, process and output, as comprising the teacher education system. According to her, whether the total system succeeds or fails as a viable whole will depend on the strength of the qualitative components at each stage of the system. She observed that in all South-East Asian countries it does happen that the input is less than desirable and the process has unfortunately not been properly worked out. She however maintained that what we cannot do with the input stage can be done at the process stage in order to bring out that which will eventually help to upgrade the whole system and prevent deterioration.

RW suggested that at the input stage, which normally consists of objectives, persons and facilities in that order, vagueness about what is required is more characteristic of pre-service education than of in-service education, although what condition obtains for one does to some extent affect the other. At the input stage of pre-service education, objectives are seldom expressed in operational terms, nor are they specifically regarded as important to the system. Where they are enunciated they are very global and there is often a touch of the sublime. To illustrate this, RW quoted the following which was stated at the Unesco Conference on the Status of Teachers in Paris, 1966:

> "The purpose of a teacher preparation programme should be to develop in each student his general education and personal culture, his ability to teach and educate others, an awareness of the principles .which underlie good human relationship within and across the rational boundaries and the sense of responsibility to contribute both by teaching and by catering to social, cultural and economic progress."

She emphasised the need to redefine our terms and say specifically to ourselves what should we do when we educate teachers. For instance, it may sound very nice to say let them understand and have an awareness of things; but understanding and awareness are conditioned by certain norms, as is true of the nine countries which were the main concern of RW's paper, namely Burma, Cambodia, Laos, Malaysia, Indonesia, Philippines, Thailand, Singapore and South Vietnam.

RW indicated that such countries as the Philippines and Thailand have gone a little further ahead in stating their objectives, but they reflected the Unesco global vagueness, with here and there a little glimpse of practical lucidity. On the other hand, with countries like Singapore and Malaysia, the statement of objectives is seldom made explicit and they are conspicuous by their absence in their manifest aims. In her view, the form of teacher education has not undergone very much change since it was introduced in colonial times, although the form has occassionally been modified in degree, the over-riding factor being one of meeting quantitative demands. She pointed out that at the present time of need in Singapore, the trainee teachers have to teach a full day and then go back in the afternoons for part-time courses. In other words, the ploy was to increase the burden of the teachers without looking at the specific objectives of teacher training.

RW went on to say that the objectives of in-service training are frequently stated in somewhat more practical terms. Citing from the Report of the Regional Symposium on In-service Training of Primary School Teachers in Asia, RW compared, for example, the Indonesian aim "to enable qualified teachers and talented teachers to become head teachers and for supervisors to become inspectors" with the Laotian aim "to select suitable candidates to fill the post of principals." She felt that attempts at upgrading people through in-service training did not seem to her to be very logical, for it would appear as though it is taken for granted that the inspectors know a little more than principals, principals know a little more than secondary school teachers and so on down the line, so that a person who does not need to know very much is the primary school teacher. In order to boost the image of primary school teachers, Singapore has recently started a massive retraining programme to upgrade these teachers. In order to illustrate her point about the greater importance of the primary school, RW suggested that her reading of the latest research seems to indicate that when we establish in children a good reading ability during their first few years, then they may not even need any teachers as long as they are kept supplied with good books. Thus, according to her, students at the Faculty of Education who are honours graduates have not been tested and tried if they have not experienced teaching in the primary schools.

RW then elaborated on what she meant by the three components of in-service education, namely remedial education, re-education and continuing education. She pointed out that qualitatively the solutions to problems in South-East Asia did not differ much from those in other countries. This is a direct consequence of borrowing models of teacher education from colonial cults without much examination as to their relevance. The situation has, according to RW, been further aggravated by the fact that Unceso itself has tended to give world solutions and in lumping diverse regions in South-East Asia, it always ended up with the same vague, generalised statements.

Another component of the input stage involves persons. The vagaries of the current Indochina war have according to RW, aggravated the present shortage of teachers in countries like South Vietnam, Cambodia, Laos and Thailand. The Report of the Unesco International Conference of Public Education in Geneva, 1963, illustrates the increasing demands after the second World War and the inability of these countries to meet these quantitative demands.

In countries like Singapore, Malaysia and the Philippines where there seemed a likelihood of stabilisation of teacher supply, other factors have intruded to upset the equilibrium. Thus, RW observed that in Singapore, successful industrialisation and national defense have in the last two years depleted the teaching rank. In Malaysia, a change in the medium of instruction has created a shortage of specialised teachers of such subjects like Science and Mathematics. In the Philippines, the poor inducements offered by the teaching service has created an accute shortage of men teachers, as shown in Appendix I. RW expressed her concern over the imbalance in the teaching service, especially at the secondary level, where, according to her, adolescent boys need certain types of guidance that women cannot give. Since Indonesia has been able to supply teachers to Malaysia, RW concluded that her problem was akin to that of the Philippines, where there is no lack of teachers but rather of good teachers.

Considering the first group of countries, RW felt that since the academic qualifications and minimum age of entry vary considerably, as shown in Appendix II, different types of courses must be made available. For other countries where stabilisation of supply is likely to be or has been attained, standardisation of acceptable levels of admission to professional training as well as of acceptable levels of achievement needs to obtain if, according to RW, professionalism is to be attained.

The least important component of the input stage, in RW's opinion, concerns the available facilities, which range from situations where only bare classrooms are available to the presence of language laboratories, special facilities for videotaping and other equipment in keeping with modern advances in educational technology as occurs in Singapore and Malaysia. The facilities are considered least important because they do not make a significant dent to the quality of education, so long as teacher educators appreciate the essentials of teaching as an art and can exemplify good teaching. Unfortunately though, there has been a tendency to emphasise facilities and teaching has become a harsh affair to which no outsider may be admitted.

Dealing with the process stage of teacher education, RW observed that instead of specifying what teachers may be expected to do within the limited time available during teacher training, society tends to lay down the expectations and teacher educators accommodate to them. She hastened to say that she expects teacher education institutions to fulfil certain expectations of society as long as these are not limitless demands.

RW then delineated three roles of teachers as applied to the process stage, namely that teachers are expected to:

1. teach given subjects to given number of pupils;
2. be rational agents of change in order to facilitate and accelerate economic and social developments;
3. supply models of acceptable moral conduct.

In respect of the first role, various academic and professional courses are offered in pre-service teacher education. RW observed that while academic course requirements are multiplied in inverse proportion to the years of academic preparation prior to admission to teacher education, professional courses are multiplied in direct proportion to the demands of society. Thus, primary school teachers carry a heavy academic load during pre-service training, whereas secondary graduate teachers are not expected to study academic subjects per se except to study the special methods associated with these subjects. There have also been a multiplication of professional courses such as child psychology, anthropology, sociology, guidance and counselling, educational technology, testing and measurement, etc. RW was however disappointed that in educational philosophy, we often talk of Plato and Aristotles but not what Tagore, Confucius or the Gurus have to say.

And because of the second function, such courses as economics of education, development education, ethnics of education, etc. have as pointed out by RW been added to the already overcrowded teacher education curricula. As a consequence, either the courses make but a shallow impression on the student or he suffers from an imbalance of treatment between what he requires as general versus professional education, between what is academic versus professional, between what is theory versus practice, and so on. Referring to some tables in a book by Pires on a Survey of Primary Teacher Education in Asia, RW illustrated the variables in the time allocation for theory versus practice. She pointed out that in one institution, only 3% of the time was developed to practice teaching, the rest given to talk and chalk. There were also correspondence courses where the trainees go through no teaching at all and this was compared by RW to teaching swimming by correspondence.

RW then posed a number of questions which need to be answered at the process stage. Firstly, how may a trained teacher be identified? By his skills, specifically defined, by times spent in training, by exposure to specific programmes, by a combination of these criteria, or by some other criteria? Second, are levels of training to be judged on the academic attainment of specific groups of trainees or are they to be assoicated with a hierarchy of teaching skills? Do teachers undergo a series of training starting from para-professional training and ultimately returning for various specialisations as in the case of doctors, or are they being turned into all kinds of teachers by some strange feats of metamorphosis? Finally, can a trained teacher claim to have acquired a knowledge of his task which makes him supervisor to the untrained when put in the classroom? Is it because of our inability to say that a trained teacher is superior to one who is untrained that enables parents, administrators and politicans to tell us what to do, that we have put ourselves in their grip by sheer lack of definition? RW pointed out that at this point South-East Asia has no answer to give, but she hoped that the more advanced countries might be able to offer some solutions.

In terms of in-service education, RW dismissed remedial education and re-training as viable long-term concerns. To her, continuing education offers a ray of hope, especially when we are prepared to conceive of education courses as occuring at different levels. Citing Israel Sheffler's remark on the paradigmatic uses of the word "teach," RW felt that he was reminding us of the need to be as precise as possible as to the aim in teacher education, that if teaching is our purpose, then it is also our purpose to teach students why something is such and such, or to teach students why to do such and such, or teach students why how to do such and such. Thus if it is our purpose to teach students why how to teach, then the teaching skills should be listed. RW stressed that at the first level of teacher education, it may be best to concentrate on norm acquisitions, or perfecting the techniques in the classroom (the science of teaching) and teaching the norms (the art of teaching). According to her, there is no need at the first level of teacher education to give the teacher all kinds of courses, like measurement. Instead it would be much better that the teacher should understand what the demands of duties are, how he should work in classrooms and what it is that he hopes the nation to achieve through him.

In providing opportunities for continuous growth individual differences will come to the surface. Hitherto pupil differences tend to be overemphasised. In her research on pupils' learning in the U.S.A., RW found that she could not point her finger on any one school teacher as ideal. Thus, the child from a strict home preferred the conservative teacher, the child from the home that had no rules somehow went for the disciplinarian and the child that was bright preferred to do everything himself. Hence, after level one courses and after having experienced teaching in classrooms different teachers are likely to return for specialised courses, as part of the programme for the continuing education of teachers.

RW finally pointed three observations of importance in evaluating the needs of teacher education in South-East Asia. First, we cannot have the same meaning and content in all the various countries and even in the same country. Second, the quality of educational output is a product not merely of the formal educational system but also of the informal system which includes the home, community and all the other out-of-school influences like all the professional cultural organisations, television, radio, libraries and museums. Third, the causes of poor quality are not peculiar to the developing countries, but the discontent with what has been achieved in quality serves as a motive for programmes.

RW concluded by pointing to the possible cyclic nature of input, process and output stages, for at some point the output can become the input, and urged that if this cycle is to continue spiralling, then it is time for us to rethink the needs of teacher education in our own countries.

APPENDIX I

Percentage Distribution of Full-time Teachers by Sex*

Country	Survey Year	Primary		Secondary	
		Male	Female	Male	Female
		%	%	%	%
Burma	1961	66.6	33.2	57.3	42.7
Cambodia		. . .	. . .	. . .	. . .
Indonesia	1959	. . .	. . .	79.7	20.3
Laos	1957	. . .	. . .	63.1	36.9
Malaysia: Malaya	1960	66.8	33.2	. . .	. . .
Singapore	1962	47.4	52.6	65.7	34.3
Philippines	1960	25.7	74.3	36.7	53.3
Thailand	1962	66.2	33.8	57.7	42.3
Viet-Nam, Rep. of	1959	65.3	34.7	84.7	15.3

*Source: *Education in Asia,* Ministry of Education, Japan 1964, p. 81.

Percentage Distribution of Full-time Teachers by Qualification*

Country	Survey Year	Primary		Secondary	
		Qualified	Non-qualified	Qualified	Non-qualified
Burma	1961	57.2%	42.8%	85.6%	14.4%
Ceylon	1962	67.4(1)	32.6(1)	. . .	. . .
China, Rep. of	1962	. . . (2)	. . . (3)	98.3 (2)(5)	1.7 (3)(5)
India	1960	64.1	35.9	65.4	34.6
Japan	1962	98.0	2.0	98.9	1.1
Korea, Rep. of	1960	98.5	1.5	91.4	8.6
Malayisa: Singapore	1962	43.0 (2)	57.0 (3)	69.5	30.5
Pakistan	1960	69.5	30.5	. . .	. . .
Philippines(4)	1960	98.6	1.4	99.0 (5)	1.0 (5)
Thailand	1961	54.0	46.0	64.0	36.0

(1) Including secondary school teachers
(2) Trained
(3) Untrained
(4) Public school teachers only
(5) General secondary teachers only

*Source: *Education in Asia,* Ministry of Education, Japan 1964, p. 81.

Establishing Body, Conditions of Admission and Duration of Course for Primary Teacher Training*

		Conditioning of admission		Duration
Country	Establishing body	Minimum age	Previous studies required	of full-time course (in years)
Burma	Central	16	General education of 9 to 10 years	1–2
Indoneisa	Central	11	6 year primary education	4
Laos	Central	14	6 year primary education	4
Malaysia: Malaya	Federal	18	Lower certificate of education examination	3
Singapore	Central	17	7 year primary education in a Malay School	3(part-time
			Cambridge Oversea School Certificate or Government Senior Middle Certificate of Specified standard	2
			"	3(part-time
Philippines	Central	16	Completion of primary and Secondary education (10 years)	4
Thailand	Central	17	Completion of 10th grade	2(general)
			Completion of 10th grade	3 (vocational)
Viet-Nam, Rep. of	Central	17	9 year general education	1 (for grades 1–3)
				3(for grades 3 4 and 5)

*Source: *Education in Asia,* Ministry of Education, Japan 1964, p. 132.

STUDIES IN MICROTEACHING. I. A PEDAGOGICAL MODEL

Sim Wong Kooi

1.0 Introduction

That the teaching-learning situation is indeed complex and multivariate in nature is demonstrated by increasing attempts to reduce it to managable proportions by the use of models. As defined by Maccia,

> "A model is an object or a characterisation used either to represent or to be represented. When an object on characterisation is used to represent, it is a model of; when used to be represented, a model for."[1]

Most pedagogical models are models of the teaching-learning encounter.

In reviewing research dealing with the assessment of teacher behaviour and instruction, Ryans observed that:

> "An overview of the reports suggested that investigations have been piecemeal and fragmentary for the most part, only occasional attempts have been made to conduct coordinated programmatic research or to relate studies to some theoretical model."[2]

More recent researches[3] have tended not only to be systematic but also to be closely associated with some theoretical model, thereby emphasising the fact that conducting "coordinated programatic research" and relating "studies to some theoretical model", should be conjunctive rather than disjunctive is implied by Ryans' statement. However, even these recent studies have tended to follow the trend towards focusing upon more narrow concerns, as observed by Gage, who, in reviewing paradigms for research on teaching, pointed out the growing transition from the more general "criterior-of-effectiveness" paradigms to the more specific "teaching process" paradigms.[4]

What is needed is not a model which pretends to be comprehensive and panoramic, nor one which is detailed and specific. Rather, a basic model, in which the essential components and their relationships are encapsulated and from which submodels and super-models may be generated, is what the writer considers most desirable. This paper will therefore attempt to describe a pedagogical model which was developed to deal more meaningfully not only with ordinary classroom (macroteaching) situations but with scaled-down teaching-learning (microteaching) encounters.

2.0 The model (as shown in Fig. I) highlights the interactions of five omnipresent elements of the pedagogical encounter, namely the teacher (T), the Pupil(s) (P), the Content (C), the Objectives (O) and the Environment or Ecology (E). T is taken to include not only regular classroom teachers, but also student teachers, teaching aids, guidance counsellors and such enlivened mechanisms as teaching machines, textbooks and television programmes which take on instructional roles, etc. P would represent the target of the instructional process which is aimed at optimising and maximising the learning of C by P in E with O in mind. C includes not only subject matter content, but also adjunctive content, such as instructional aids which provide P with desired educational experiences. O incorporate not only intended objectives but also actual or manifest objectives. Finally, E represents the Cultural, Organisational, Socioeconomic and Temporal aspects of the Environment that exert facilitating or constraining influence upon the pedagogical encounter.

Each element of the model (A say) influences another element (B say) in a specifiable manner and the nature of influences (i say) is of several types. According to the scheme:

$$A \xrightarrow{i} B$$

i = e represents the *effect* of non-human elements (C & O) on human elements (T & P).

i = m represents the *manipulation,* or method of dealing with, content or educational experiences.

i = r represents the *reaction* of human elements to objectives of instruction.

i = c represents the *correlation* in between objectives and content.

i = a represents the *affective* impact of teacher on pupils and vice versa.

2.1 Some Interactions

There are 5C2 or 10 possible dyadic relationships or first-order interactions among the five elements. Each of these would represent an area of concern which need to be taken into consideration in pedagogical research and which may become foci for research in their own rights. For purposes of illustration, consider, for example, the different aspects of the environment. Each of these aspects can in turn interact with the remaining 4 elements of the model to provide areas which may be worthwhile investigating. Examples of such interactions are shown in the Table overleaf.

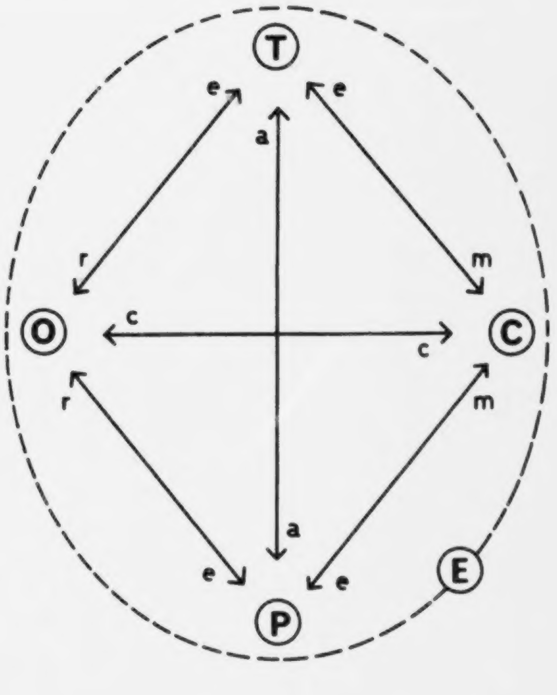


FIG. 1 A PEDAGOGICAL MODEL

E	P	T	O	C
Cultural:	Peer culture	Teachers' Code of ethics	Rukun Negara	British influence on Curriculum.
Organisational:	Homogeneous Grouping.	Team Teaching	Bloom's taxonomy	Logical vs psychological structure.
Socioeconomic:	Rural vs Urban environment of child.	Professional Status of teacher.	Community objectives of school.	Vocational vs. academic syllabuses.
Temporal:	Cognitive Development	Preservice vs Inservice teacher education.	Pre & Post merdeka national aims.	Trial syllabuses.

Important triadic relationships may also be generated from the model. Taking only the four elements, T, P, C & O, we have four very important processes, namely:

(a) Preparation for Instruction by Teacher (T, O & C).

(b) Planning for Learning by Pupils (P, O & C).

(c) Approaches to Content (C, T & P), and

(d) Evaluation of Objectives (O, T & P).

These relationships are shown in Fig. 2. In preparing to teach, the teacher is principally concerned with structuring and sequencing of units of Content vis-a-vis the intended Objectives and in relation to the perceived attributes of the teacher. In planning for learning by pupils, one considers how given the type of pupils, the Content can be geared to the possible attainment of the Objectives. Approaches to Content is a joint venture, involving both Teacher and Pupils. Sometimes it is a more direct approach where; for example, concepts are prescribed by the teacher for pupils to assimilate or accommodate while at other times it is a more indirect approach, where, for example, pupils are induced or guided to "discover" concepts for themselves. Ideally, Evaluation of Objectives should not only involve both Teacher and Pupils, but should also comprehensively incorporate not only teacher Evaluation but also pupil self-evaluation.

It is conceivable that different levels of approach and of evaluation may be envisaged, as shown in Fig. 3. For instance, for the more direct approach, the least desirable level (I) is one in which the teacher merely regurgitates Content and does not bother whether or not it gets across to the Pupils. A slightly higher, but still undesirable, level (II) involves the interaction of Teacher and Content, where, for example, the teacher restructures the Content, but without really having the pupils in mind. At the next two levels (III & IV) the teacher does attempt to put the content across to the pupils but is not mindful of whether or how the pupils interact meaningfully with the Content, as occurs at levels V & VI. It may in fact be suggested that whether or not one employs a more direct (e.g. expository) approach or a more indirect (e.g. discovery) approach is immaterial. The most desirable level of approach is associated with the maximum interaction between the Pupils and Content. Perhaps an even higher level of desirable approach involves two-way interactions among all three elements. Of particular concern would be a flexibility of approach, so that a teacher would not only be able to switch from one type of approach to another, but also to be able to modify objectives extemporaneously depending on the Environmental constraints and the nature and direction of the pedagogical encounter.

In the case of the evaluation of objectives, it is perhaps more important to emphasise comprehensiveness of evaluation, for besides evaluation by the teacher, every encouragement should be given to pupils' self-evaluation. The most (desirable level would involve the maximum interaction of the Pupils and the) Objectives. It must however be pointed out that although it is conceptually useful to separate out Evaluation from Approach, in practice these are sometimes inextricately inter-twined.

Other types of triadic relationships, namely those involving E, are depicted in Fig. 4. Each of these interactions can theoretically be singled out for an in-depth study in either a macro-teaching or micro-teaching situation.

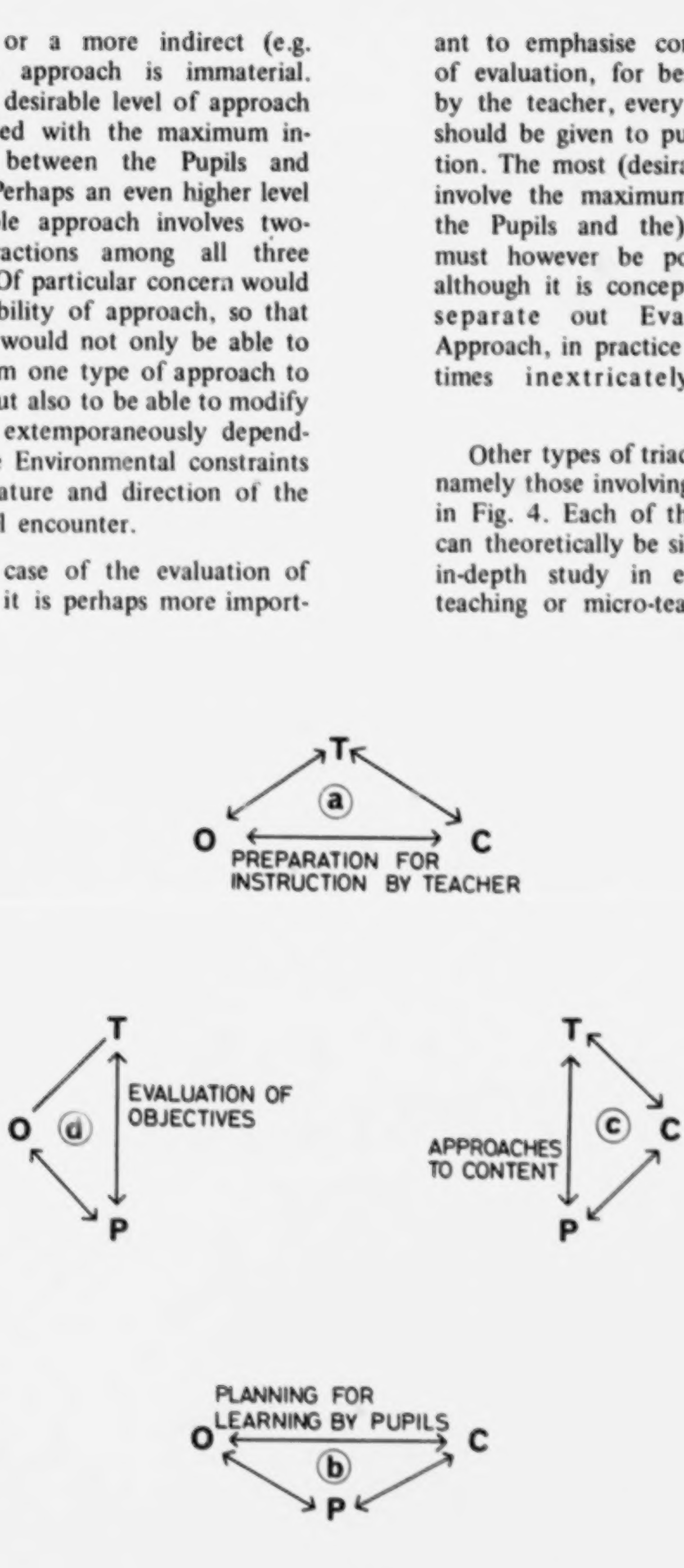

T
ⓐ
O
C
PREPARATION FOR INSTRUCTION BY TEACHER
T
O
ⓓ
EVALUATION OF OBJECTIVES
P
T
ⓒ
C
APPROACHES TO CONTENT
P
PLANNING FOR LEARNING BY PUPILS
O
C
ⓑ
P

FIG. 2 TRIADIC RELATIONSHIPS WITHOUT E

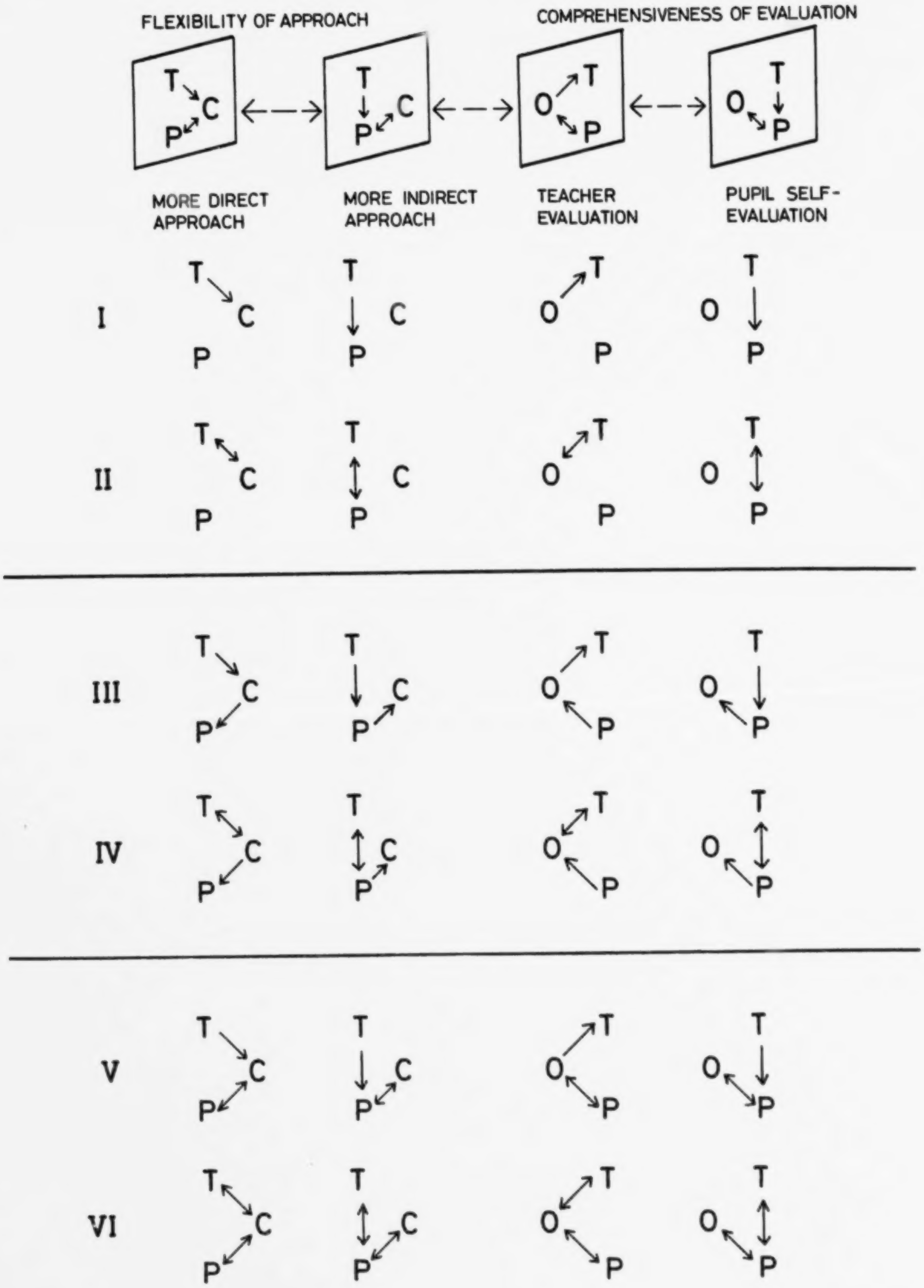
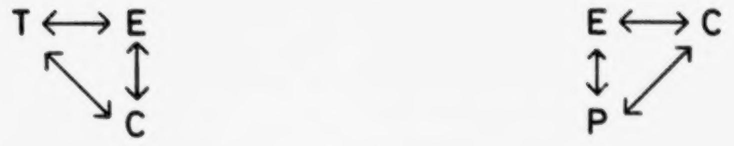
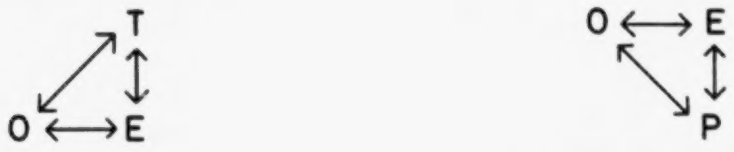

FLEXIBILITY OF APPROACH
COMPREHENSIVENESS OF EVALUATION
MORE DIRECT APPROACH
MORE INDIRECT APPROACH
TEACHER EVALUATION
PUPIL SELF-EVALUATION
I
II
III
IV
V
VI
T
C
P
O

FIG. 3 LEVELS OF APPROACH AND EVALUATION



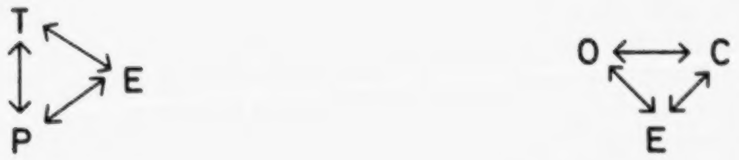
(a) Teacher selection of environmentally relevant instructional materials.

(b) Pupil involvement in environmentally relevant learning experiences.



(c) Teacher perception of objectives in relation to environment.

(d) Pupil awareness of objectives in relation to environment.



(e) Interpersonal relationships in different contexts

(f) Integration of Content and Objectives in different contexts.

FIG. 4 TRIADIC RELATIONSHIPS WITH E

3.0 Eight Logical Steps in Lesson Planning

The value of the model is that in focussing on the interactions among five intuitively crucial elements of the teaching-learning situation, important models of other kinds of situations would result from the further elaboration of these elements and their interactions. One such model result from the systems analysis of the steps involved in lesson planning. The steps are logical in the sense that one leads to another in a commonsensical, but not simplistic, manner when we bear in mind that the ultimate goal of the pedagogical encounter is the optimisation and maximisation of pupils' learning.

Briefly, when someone intends to teach a lesson, the first logical question should be: For what purpose? And, with our stress in what the pupils are expected to be able to do after the lesson, the first step in lesson planning is to consider the *Learning Goals*. These goals would not be complete unless we are able to identify the pupils for when the lesson is intended in terms of level of ability, attainment and interest. Hence the next step is the consideration of the *Identity of Pupils*. Having delineated the goals and identified the pupils, an obvious question is: Whether these goals are appropriate to the level of understanding of the majority of the pupils? To teach a lesson for which pupils lack pre requisite knowledge and abilities is futile and to teach a lesson for which pupils have already mastered the concepts previously is equally pointless; thus, *Viability of Goals* is the third logical step.

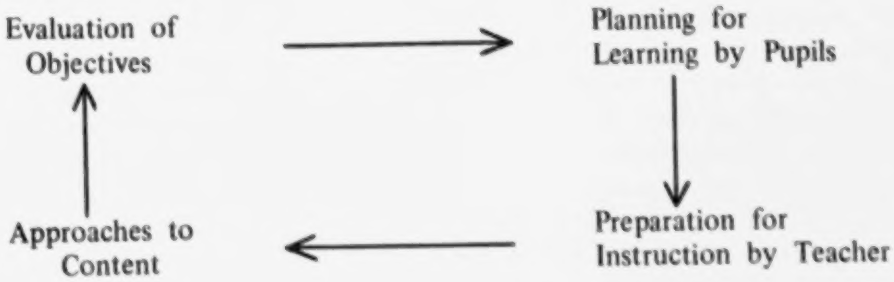
It is only after we are satisfied that the goals are viable that we can consider the available *Instructional Materials*. Here, we are concerned not only with instructional aids but also with the subject matter content which together comprise the educational experiences to which pupils are exposed. Knowing why the lesson is to be conducted, for whom and with failure to include Planning for Learning by Pupils and Preparation for' what materials, we can then logically plan for pupils learning, which is quite distinct from the strategy of teaching– i.e., there may not be a one-to-one correspondence between how pupils learn and how teachers teach. The fifth step is therefore 'labelled as *Learning Plans*.

In order to decide an appropriate instructional strategies to use, the attributes of the teacher would have to be considered, for example, in terms of strengths and weaknesses or of the teacher's perceptions. Thus, only after an examination of *Teacher Characteristics* are in a position to select appropriate procedures that are suited to the needs of pupils as well as the teaching styles of the teacher. Ideally, the teacher would do well to consider how to approach teaching of the content in both more directly and more indirectly. Associated with the selection of suitable *Teaching Techniques* would be a consideration of how the teacher and pupils alike would be able to evaluate the success or failure of the pedagogical encounter. The final step, *Evaluation Procedures*, is so crucial that it has been separated out from the conduct of the lesson. The focus here is on the extent to which the learning goals have been attained, which therefore brings us back to the frist step of lesson planning.

It is apparent that even though one can start from other than the first step and perhaps follow a non-cyclic series of steps, the aforementioned series of steps suggest a model against which lesson planning may be compared in order to ascertain if there are certain important areas that have been omitted or neglected.

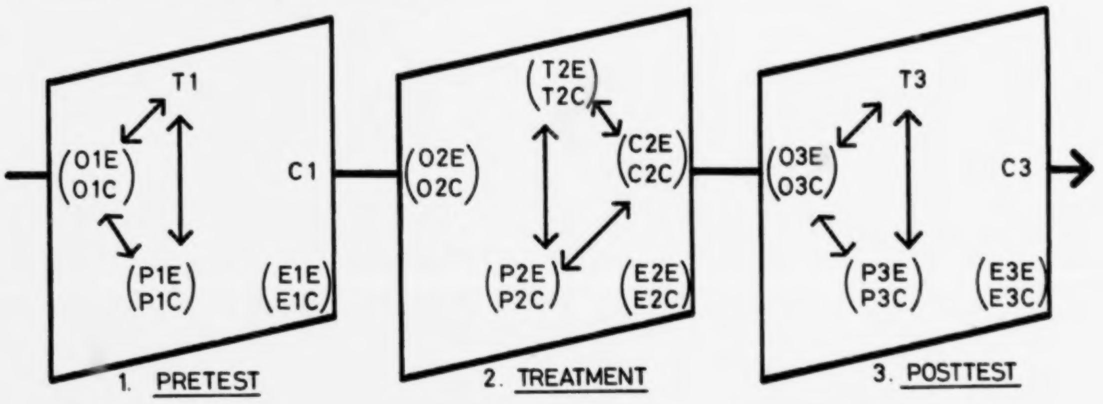
4.0 Experimental Research

Besides being suggestive of fruitful areas to investigate experimentally, the different interactions may often be juxtaposed sequentially to constitute various phrases of an educational experiment. For instance, the triadic relationships among T, P, C and O form a natural cyclic sequence as follows:


Evaluation of Objectives
Planning for Learning by Pupils
Preparation for Instruction by Teacher
Approaches to Content

In an experimental design, pretesting and posttesting may be identified with Evaluation of Objectives, while treatment is generally equated with Approaches to Content. From the above scheme it is probably clear that failure to include Planning for Learning by Pupils and Preparation for Instruction by Teacher is often responsible for differences across studies employing apparently similar tests and treatment.

Even if we confine our attention to the standard experimental design, in terms of the model, a number of assumptions are inplicit, the violations to which would constitute sources of invalidity. The scheme below shows the main interacting components during (1) Pretest (2) Treatment and (3) Post-test:–



The following assumptions should be obvious from the scheme:–

(1) $T1 \equiv T3$. Violation of this assumption would suggest that the person or instrument involved in the pretesting and posttesting are not equivalent (i.e., T1/T3). Such an effect may be identified as what Campbell and Stanley have termed "Instrumentation"[5].

(2) $T1, T3 \not\equiv T2$. As far as possible the person doing the evaluating should not be the person doing the teaching, for this would otherwise result in a *"Halo Effect"* whereby the experimenter tends to become more lenient when acting as evaluator, or else more strict, resulting in a *"Horn Effect."*

(3) $T2E \not\equiv T2C$. Frequently the experimenter acts as teacher for all treatment groups. This may produce a biassing effect associated with what is termed the *"Teacher variable."*

(4) $P1 \equiv P2 \equiv P3$. The attrition of subjects over time is what Campbell and Stanley termed *"Experimental Mortality"*. *This* attrition effect may be brought about when P1>P2, P3 or P2 >P3. In addition, there is also the reversed order effect which we might label as the accretion effect which occurs when P3> P2, P1 or P2>P1.

(5) $P1C \equiv P2C \equiv P3C$. When the control group changes systematically over time (i.e. P1C ≢ P2C, P2C ≢P 3C), the obtained difference in performance between pretest and posttest may reflect the internal process of *"Maturation"*. On the other hand, if there is no systematic change and the subjects appear to behave differently between pretest and posttest (i.e. P1C ≢ P3C), then it is possible that this could be due to the imperfect correlation between the test performances and the fact that the subjects represent an extreme group. Such an effect has been termed the *"Regression" effect.*

(6) $P1E \equiv P1C$. The comparison

groups should as far as possible be equivalent. Biases would however result if there has been differential *"Selection"* of subjects for the different groups.

(7) $C1 \equiv C3$. If gain scores are to mean anything the tests before and after presumed gain should be comparable in terms of the Content they assess. Otherwise there would be *"non-equivalence of criteria."*

(8) $C2E \not\equiv C2C$. The educational experiences of the comparison groups must be psychologically different, otherwise no significant difference is likely to obtain. Such a situation (i.e. $C2E \equiv C2C$) may result in an *"undifferentiated treatment effect."*

(9) Denoting attained objectives by the subscript "a" and intended objectives by "i", $03a - 01a \equiv 02i$, all things being equal, the gain scores should reflect the objectives which are set out by the treatment. Otherwise (i.e. $03a - 01a \not\equiv 02i$), the practice or fatigue effect of the pretest might have affected performances during the posttest. Such an effect has been termed by Campbell and Stanley as the *"Testing effect."*

(10) $01a \not\equiv 03a$. If performances between pretest and posttest are not very different ($01a \equiv 03a$), assuming that this is not the result of the equivalence of treatment, the phenomenon may be due to the fact that the test instrument is rather insensitive in enabling subjects to attain either near maximum or near minimum scores. These effects may be termed *"Ceiling effect"* and *"Floor effect"*, respectively.

(11) $01i \equiv 03i$. *"Non-equivalence of criteria"* can also result when the pretest and posttest objectives are different or when they measure different things.

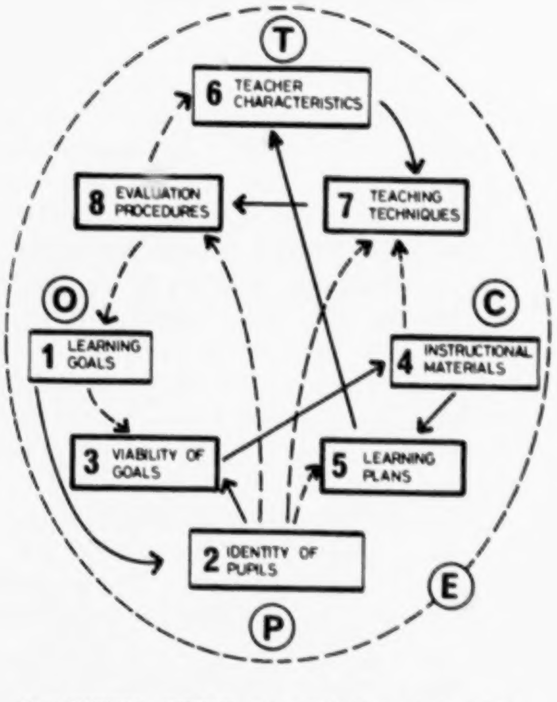
(12) $02E \not\equiv 02C$. Similarly an *"Undifferentiated treatment effect"* would result from the lack of differentiation between the intended objectives for the treatment group.

(13) $E1 \equiv E3$. When the environments differ between the pretest and posttest session, an invalidating influence which may be termed *"Intersession history"* would occur.

(14) $EE \equiv EC$. The treatment groups should similarly experience equivalent environments. Otherwise an *"Intrasession history"* effect is likely to take place.

It can be seen therefore that all the factors indicated by Campbell and Stanley as contributing to internal invalidity, and more, may be derived from an elaboration of the model. Sources of external invalidity are more complex, but with a few additional assumptions, all these sources as pointed out by Bracht and Glass,[6] and more, may also be derived from the model. Within the limitations of this paper, this exercise is omitted for consideration but the interested reader may be encouraged to pursue this further by bearing in mind that external invalidity arises in roughly two ways:– (1) When various elements interact with the treatment to render it non-generalisable, and (2) when various elements and their interactions are inadequately specified to be generalisable to a population of elements.

In order to assess various aspects of teaching, a number of features of the pedagogical encounter were generated by considering the various attributes and processes involved in planning a lesson. Referring to Fig. 5, the four steps shown in the outer portion represent attributes of the corresponding elements of the model, T, P, C and O, while the four other steps constitute the important processes of the teaching-learning situation which therefore suggest suitable foci for the assessment of teaching. Renaming them as Aims, Planning, Conduct and Evaluation, they then represent the four areas incorporated in the Faculty of Education, Assessment of Teaching Scales (or FEATS as shown in the Appendix.). The various features that could be observed in a lesson are therefore enumerated and then reduced to a manageable few according to priorities, stressing process features rather than attribute features. For example, teacher characteristics like mannerisms and voice have been omitted, although these may be commented upon where relevant. Similarly under Evaluation, we have included only the use of evaluation to improve teaching on the one hand and learning and thinking on the other hand, rather than say the varieties of evaluation procedures used.



8 LOGICAL STEPS IN LESSON PLANNING

FIG 5

Hence, the models besides suggesting different areas of a pedagogical encounter that may be studied, also provides a basis for scrutinsing experimental research and for constructing suitable evaluation instruments. The microteaching[7] situation is especially amenable to experimental research for investigating the interplay of the different elements of the model. A recent study[8] compared three groups of students, one with 10 weeks of regular classroom practice teaching, another with 5 weeks of practice teaching followed by 5 weeks of microteaching experience, while the third group had 5 weeks of microteaching first followed by 5 weeks of practice teaching in schools. While the full report is not yet available; it may be noted that generally the groups performed in an increasing order according to the criteria employed.

Another study under way involves the effect of treatment via a course on students' ability to describe and evaluate lessons reliably and validly. A future extension of this study might consider the effect of various information about each of the elements on students' ability to describe and evaluate objectively. For example, students could be asked to describe and evaluate lessons in which information on various combinations of the following may or may not be given:–

Teacher:	experienced practising teacher versus inexperienced student teacher; graduate versus non-graduate teacher; specialist versus non-specialist teacher.
Pupils:	high ability versus low ability pupils; pupils familiar to teach versus new class of pupils; highly motivated versus listless pupils.
Objectives:	given objectives closely related versus only slightly related to lesson; given objective aimed at high level versus low level of performance; given objectives varied versus stereotype.
Content:	given topic closely related versus only slightly related to lesson; given topic for previous lesson closely related versus only slightly related to lesson; more instructional aids intended for use versus fewer aids.
Environment:	lesson in prestigious versus unknown school; lesson in well disciplined versus poorly disciplined school; well equipped versus poorly equipped school.

5.0 An Experiment on Student Teachers' Preceptions of Teaching Competence

As an illustration of an experiment involving microteaching, a preliminary study of student teachers' perceptions of teaching competence will now be described.

Prior to the full exposure of Diploma of Education students to the scheme for the assessment of teaching, their perceptions of what constituted teaching competence were solicited. After viewing a taped microteaching lesson, the students were asked to evaluate the lesson under the four headings of Aims, Planning, Conduct and Evaluation, as well as on the whole. In addition, they were asked to (a) specify the features under each broad area that they were looking for, (b) indicate the strongest point and the weakest point of the lesson, (c) weight the four areas by dividing 10 points among them, according more points to areas that they feel ought to be emphasised more, and (d) weight the different features for each of the main areas, again on the basis of a total of 10 points for each area. Six weeks later, the evaluation form was fully explained and discussed and this was followed by a subsequent reviewing of the taped lesson and evaluation using the F.E.A.T.S.

Of the 81 Science students involved in the study, only 57 forms are usable in the sense that only responses to both evaluation sessions – the pretest and the posttest – and completely filled forms were accepted. Notwithstanding effects of the selection X mortality interaction, several qualitative and quantitative observations may be of interest. First and foremost, it was manifestly evident that there are important areas of difference between the perceptions of students as compared with the perceptions of staff. For example, the bulk of the students tended to list out the aims and under this rubric rated for the extent to which these aims were fulfilled. Furthermore the aims identified were invariably teaching aims rather than learning aims as emphasised by staff. A related perceptual difference involved the conception of flexibility of approach, on which the Faculty places considerable premium. At one point of the lesson, the teacher found it necessary to digress in order to go over some presumably poorly understood concept. Many students pinpointed this digression as the weakest point of the lesson during the first evaluation session. After exposure to the F.E.A.T.S., a few still maintained that the teacher's digression was her weakest point but they were more specific in their comments – for example, they generally felt that the breadth and depth of digression constituted too much of a deviation.It is also interesting to note that quite often similar statements appeared as strongest point as well as weakest point for some of the students. For instance, some of them indicated that the teacher's strongest point was her involvement of pupils, while some others suggested that the weakest point was the lack of pupil involvement. Arising from the ensuing discussion session it became clear that while the former were talking about the mental involvement of pupils, which was a creditable feature of the lesson, the latter were referring to the lack of physical involvement of pupils in the experiments which were demonstrated entirely by the teacher. Another area of apparent conflict concerned the use of instructional aids which was regarded as the strongest point by some and as the weakest point by some others. It was revealed in the discussion that some who reported the teacher as weak in respect of instructional aids had dismissed the equipment and materials for the experiment and the chalkboard as instructional aids. Similarly, yet another area of difference concerned the interpretation of what evaluation meant. For many this seemed to be confined to formal evaluation such as the use of tests and questioning by the teacher tended to be ignored as part of evaluation.

Two kinds of quantitative measures are implicit in the F.E.A.T.S., namely the ratings and the weightings of various features of the lesson. The overall and sub-grade ratings are made on a kind of "gestalt" process, taking the lesson or each area as a whole. Theoretically, the aggregate scores, obtained by multiplying each rating of the four areas by the corresponding weighting and summing the products, should correlate highly with the overall scores. Tables Ia and Ib show the bivariate distribution and the corresponding means, standard deviations and correlation coefficients for the pretest and posttest situations respectively.

It is apparent that, although the correlations are not very high, there is a fair correspondence between the piecemeal and the overall assessments of lessons even for student teachers. The absence of near-perfect correlations indicates the lack of reliability or consistency in part-whole assessments, or the incorporation of features extraneous to the given form. Even though the means between pretest and posttest scores do not seem to be greatly different, tests of significance of difference between means for the correlated sample reveal a high level of significance. Thus, the t for the difference between the aggregate scores is 4.12 and the t for the difference between the overall scores is 5.25, both of which are significant beyond the .001 level. This represents a significant change in the evaluation of the lesson by the students as a result of a treatment situation in which aspects of evaluation are classified and discussed and differences in pretest ratings are ironed out.

Table Ia. Correlation between Pretest Aggregate Scores and Overall Scores.

		Overall Scores					
		5	4	3	2	1	
Aggregate Scores	45	–	2	–	–	–	2
	40–44	–	8	–	–	–	8
	35–39	–	12	7	–	–	19
	30–34	–	6	13	–	–	19
	25–29	–	2	4	–	–	7
	20–24	–	–	–	2	–	2
		0	30	24	3	0	57

	Mean	S.D.
Overall Scores:	3.5	0.6
Aggregate Scores:	34.6	5.5

r = 0.61

Table Ib. Correlation between Posttest Aggregate Scores and Overall Scores.

		Overall Scores					
		5	4	3	2	1	
Aggregate	45	4	–	–	–	–	4
	40–44	–	12	–	–	–	12
	35–39	1	27	3	–	–	31
	30–34	–	6	3	–	–	9
	25–29	–	–	–	1	–	1
		5	45	6	1	0	57

	Mean	S.D.
Overall Scores:	3.9	0.5
Aggregate Scores:	37.7	4.4

r = 0.68

As a matter of interest, the distributions of ratings versus weightings for each of the areas in the F.E.A.T.S. are presented in Tables IIa, IIb, IIc and IId.

Table IIa. Bivariate Distributions of ratings versus Weightings for Aims.

		Pretest Ratings						Posttest Ratings					
		5	4	3	2	1		5	4	3	2	1	
	1	–	6	7	–	1	14	–	2	5	–	–	7
Weightings	2	–	16	21	1	–	38	4	16	21	1	–	42
	3	–	4	1	–	–	5	–	4	3	–	–	7
	4	–	–	–	–	–	0	–	1	–	–	–	1
		0	26	29	1	1	57	4	23	29	1	0	57

Table IIb. Bivariate Distributions of Ratings versus Weightings for Planning.

		Pretest Ratings						Posttest Ratings					
		5	4	3	2	1		5	4	3	2	1	
	1	–	–	–	–	–	0	–	–	–	–	–	0
Weightings	2	–	5	12	–	–	17	2	23	10	–	–	35
	3	1	13	15	3	–	32	2	13	6	–	–	21
	4	1	2	2	2	–	7	–	1	–	–	–	1
	5	–	1	–	–	–	1	–	–	–	–	–	0
		2	21	29	5	0	57	4	37	16	0	0	57

Table IIc. Bivariate Distributions of Ratings versus Weightings for Conduct.

		Pretest Ratings						Posttest Ratings					
		5	4	3	2	1	2	5	4	3	2	1	
	1	–	1	1	–	–	2	–	–	–	–	–	0
Weightings	2	1	4	1	–	–	6	1	3	2	–	–	6
	3	1	20	11	2	–	34	5	21	2	–	–	28
	4	1	7	5	1	–	14	3	16	1	–	–	20
	5	–	1	–	–	–	1	1	1	–	–	–	2
	6	–	–	–	–	–	0	–	1	–	–	–	1
		3	33	18	3	0	57	10	42	5	0	0	57

Table IId. Bivariate Distributions of Ratings versus Weightings for Evaluation.

		Pretest Ratings						Posttest Ratings					
		5	4	3	2	1		5	4	3	2	1	
Weightings	1	–	2	3	1	–	6	–	2	–	–	–	2
	2	2	11	20	4	–	37	3	21	16	2	–	42
	3	1	9	2	1	–	13	–	4	9	–	–	13
	4	–	–	1	–	–	1	1	–	–	–	–	0
		3	22	26	6	0	57	3	27	25	2	0	57

The mean ratings and mean weightings are shown in Table III, where it is evident that changes in ratings between pretest and posttest occured mostly in the Planning and Conduct categories. The weightings suggested by students especially in the posttest also seemed to approximate the modal weightings of staff who agreed to adopt a uniform set of weightings as follows: 2 for Aims, 2 for Planning, 4 for Conduct and 2 for Evaluation. Departures were of course permissible when different ecological situations were encountered, as long as reasons for these departures are made explicit.

Table III. Mean Ratings and Weightings

		Ratings		Weightings	
		Pretest	Posttest	Pretest	Posttest
Aim	:	3.4	3.5	1.8	2.0
Planning	:	3.4	3.8	2.9	2.4
Conduct	:	3.6	4.1	3.1	3.4
Evaluation	:	3.4	3.5	2.2	2.2

6.0 A final Word

There is little gainsaying the fact that there is a prevailing danger in pivoting a great deal of research upon a model of unproven worth. The approach taken in using the model is both intuitive and empirical. Intuitively, the question of concern to anyone who wishes to investigate teaching-learning situations systematically are those of: Who? Whom? Why? What? When and Where? How? and How well? and these correspond to the elements T, P, O, C, E and the important triadic relations involving Approach to Content and Evaluation of Objectives, respectively.

The model has also led us to certain inferences about sources of invalidity which correspond to well-established empirical phenomena. The various types of empirical research which may be derivable from further elaboration of the model will speak for themselves in the sense that the results obtained may perhaps attain substantive significance when different problems are explored using the model and compared with studies of a similar nature.

Hence, although the model may not have been derived from existing theoretical conceptions, as is the case, for example, with Smith's[9] Ryan's,[10] & Snow's[11] models which are adapted from the psychological conceptions of Tolman,[12] Lewin[13] and Sears,[14] and Brunswick[15] respectively, it possesses an intuitive framework which may be appealing. While caution is urged, unless we put the model to the test we can never be certain if it is indeed helpful. Fortunately, microteaching provides ample scope for empirical testing and shall accordingly be explored in subsequent studies.

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TEACHER TRAINING IN INDONESIA AS A NATIONAL PROBLEM

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One can clearly see the relevance of the problems of teacher training in Indoneisa only if he considers them as an integral part of the human resource development. If he wants to study the perspectives of the problems on a national scale, it is indeed true, that teacher training as a unit in manpower production must be considered as such. In reality, however, not much has been done in this matter. The Five Year Development Plan that started in 1969 does not as yet show any overall approach.

The importance of education, and consequently the importance of teacher training has been accepted as an imperative conclusion. But what is it that makes teacher training so important? Why is it important, or why should it be important? In teacher education what is there to be done, and what in fact has been done? Are these supporting the development program as a whole and specifically that of manpower development programs, or are they obstructing them? At present I cannot explicitly find the answers to those questions in political statements or educational planning. In other words, education as one sector of the development scheme does not, as yet, play a functional role as a driving force in the developmental process. So far education is treated as just a dependent variable, or tolerated and seen as just a consequence of a process – whatever that is – beyond education. At the most, education functions only as an agent to meet "practical" needs. These needs usually are very momentary and situational, depending so much on the political power influencing the whole administration.

In 1964–1966 when the socio-economic situation was a crucial problem, teacher training in Indoneisa already showed a declining trend both in quality and quantity.

Between the period 1950–1960, teachers – in terms of the socio-economic strata – came from the upper-middle class, but in the mid sixties they came predominantly from the upper-lower class, and even from the lower-lower class. Considering the views of the sociologists, psychologists and anthropologists regarding the value orientation and one's attitudes in his environment, we may as well postulate that a shift of value orientation of teachers has taken place, a shift from middle class values toward lower class ones. If we further consider the fact that certain life values will always influence man's behavior, then we can assume that the professional behavior of teachers is influenced by that of the lower class aspiration. This may have a far reaching effect. Research in determining teachers' attitudes towards tradition, moral, intellectual aspirations, religions, and culture, suggest that Indonesia is facing a future generation that entirely relies on lower class values, . . . unless teacher training institutes are successful in implanting a better understanding, spirit and dedication towards the development of Indonesia.

It is precisely this point that makes me consider giving priority to teacher training institutes as agencies of supply of manpower that will in turn benefit the nation.

Other factors have made the deteriorating process of the quality of teachers worse. Between 1950 – 1960 teacher training institutes of a tertiary level were established – the first one in 1954. This was to overcome the teacher's shortage both in quantity and quality.

However, the absorption power and the appreciation of the society showed a different trend. In 1961, a task force was established to over-come the problem of over supply of elementary school teachers. In 1965, another task force was assigned the responsibility to overcome the serious problem of teacher shortage. At one time many graduates of these institutes worked almost everywhere except in the field of education itself. They worked as manual laborers, in private enterprises, banks, embassies, armed forces, local administration, and as factotums in ministries and other government agencies in the capital.

In my evaluation, at present, teacher training institutes of both secondary and tertiary level have become second class institutes rearing also second class citizens.

From the point of view of "the needs of society" the teacher education program is not always synchronized. Skills that are assumed important are not needed in real life. The social development, as a result of several socio-political and socio economic changes, is in many ways out of control. It does not follow the projected patterns for certain specific stages. As far as teacher training is concerned, an effort was made between 1950–1960 to uniform, unify, and improve the teacher training program.

Social tensions and political frictions that escalated between 1960–1965 turned the only private professional assoication of teachers (Persatuan Guru Republik Indonesia) into a labor union with all kinds of vested interests, sponsored by political parties. This intensified the negative image of teachers and their profession.

Until now efforts have been made to regard teaching as a profession. It does not have a professional code yet and it does not receive adequate legal recognition either. Yet as a force the total of Indonesian teachers is one of the largest, much greater than the armed forces which is known as a large group. The primary schools have 350,000 teachers who teach 14 million students. This number of students forms a small portion of all-school-age children that ought to be in school. However, this total of teachers is relatively small when compared to the population growth, especially when compared to all school-age children. The normal schools preparing primary school teachers, all varieties that are found in Indonesia inclusive, have at the moment more than 85,000 prospective teachers.

To solve the shortage of teachers, an addition of about 300 teacher training institutes was projected by 1971. However only 20% of the school buildings for the primary teacher training have been completed in 1968.

The abortive coup at the close of 1965 has placed teacher training in a really extraordinary complex situation. It was assumed then, that the primary school alone needed 93,000 teachers to supplant those who were directly or indirectly involved in that communist coup through the communist controlled PGRI Teachers' Assoication (the so-called Non-Union PGRI) and through other means. The output of primary schoo? teachers in 1966 was estimated at only 9,450, so that conventional ways will never solve the problem. In other words unconventional means must be employed with the consequence that these may bring about lowering the already very low standard of teacher training temporarily, or at least partially.

As of 1969, teacher training activities have entered a new phase – the Five Year Plan (1969–1973). By implementing the Five Year Plan it is expected that the gap between the pressing need for a great number of better qualified teachers on the one hand and the output of teacher training institutes on the other will be bridged.

But that does not solve teacher training problems in Indonesia. Teacher training as a means of develop human resources does not stand alone. It is influencing and is influenced by other development sectors.

At the start of the 1968 academic year, the interest of teenagers to enter SPG suddenly increased. In previous years SPG had to accommodate "second class" students that were rejected by other schools. On top of that the entrance requirements had still to be made "very flexible". But in 1968 this phenomenon changed in several areas. There was a case where one SPG had an enrolment increase of 800% without altering the requirements. Does this mean an awareness of the Indonesian Youth of the teaching job as a profession? Or is it caused by negative aspects outside the field of teacher training, for instance, secondary school graduates find it difficult to secure other jobs? Whatever the reasons, it is encouraging to know that the Indoneisan youth express a greater interest in teacher training.

Another encouraging aspect is the fact that university graduates are expressing interest in the role of education in supporting development programs. Economists, for examples, are starting to talk about education as a system of input and output, in terms of human investment, etc. But this is still sporadic. Certain experts are still considering the quick yielding program only. The recently talked about educational planning and educational assessment are in fact economic planning for education, i.e. using economic criteria in evaluating the output of education. This sort of careful interdisciplinary consideration is not a general phenomenon yet, but it is a good start.

Still another aspect that brightens us is the view of the Provisional People's Congress (MPRS) that the national budget for education be increased to 25%. The Indonesian people should appreciate this very much, since never in the past, has even half of this ever been realized. But one should not forget that such an increase is not the answer to many problems. What in fact is the main reason to increase the average 5% budget to 25%? What targets in education are to be achieved with that raise? It is based on a careful calculation of the real needs? What are those needs? I am afraid that these questions remain unanswered. If the government intends to keep the budget at a rate of 10% of the G.N.P. it means that only 15% of the proposed targets will be accomplished after five years (1973). This means an increase of 1.1% per annum. To reach 25%, this increase must be raised to 3.1% per annum during a period of five years and this is a very high increase. To maintain the situation as in 1968, i.e. 9.4% for education in general (or 6.4% for education under the jurisdiction of the Ministry of Education and Culture) we must be freed from being responsible for the education of the young who are ready to enter the labor market, (according to the school situation in 1968). This number will exceed 200,000 in 1969, and 500,000 in 1973.

Another aspect that should not be forgotten – because it is still in its infant state – is the fact that educators and foreign agencies such as the World Bank, UNESCO, NNDP, UNICEF, the Ford Foundation and others who help fund education a great deal, are introducing new methods in teaching and are applying new findings in technology to improve the efficiency of education in a very short time, including that of teacher training.

Viewed from the actual role the educational institutes in Indonesia are playing, it would not be wrong at all to evaluate this as just "preserving obsolete knowledge". It is far from inspiring or innovating new things. There is a point in launching a "frontal attack" against the preservation of old traditions. And exactly at this point that new porblems will arise, because to change education is really not that simple.

I will close this part by stating the following:

1. Teacher training as part of efforts to the care of human resources faces many problems that involve the national interest;
2. Teacher training ought to get a better, and more defined place in the development programs, because of the potentialities that are in it;
3. Teacher training has reached a crucial phase where immediate action must be taken to save it, on the basis of sound and rational planning.

CURRICULAR PROFILE OF PRIMARY TEACHER EDUCATION

There are several types of institutes responsible for the training of teachers for K-Grade VI and several other types for the Junior and Senior High level. The programs of the first mentioned group of institutes range from 6 months to 6 years in duration after 6 years of schooling (Elementary School). Some of these institutions are no longer in existence, some other will be closed in the near future, leaving only one type (Sekolah Pendidikan Guru, SPG) for the training of Kindergarten teachers (SPG, Section A), Elementary School teachers (SPG, Section B), and Special Education teachers at the general Elementary Schools (SPG, Section C). SPG being the core, there are several other institutions at the same level with primary function in implementing the inservice education.

The number of Kindergartens is growing rapidly in the last few years, and so is the need for teachers at this level. Most of these institutions are privately organized, and there are only very few public Kindergartens run by teacher training institutions; the latter are used mostly for demonstration and research purposes. On the other hand there is just a very small interest on the part of the private sector in running schools for Kindergarten teachers. Consequently, the majority of Kindergarten teachers are public teacher training graduates working either as civil servants and paid by the government (± 30%) or paid by private organizations.

In 1954, the Ministry of Education issued a curriculum guide for Kindergarten (Sekolah Taman Kanak2). One can learn from this guide that three different classes are recognized:

A – Class for children 3 to 4 years old.

B – Class for children 4 to 5 years old.

C – Class for children 5 to 6 years old.

Individual teaching is very much stressed. In addition, Frobel's method is given an important part in the curriculum. A typical list of activities (syllabus) for A-Class includes the following items:[3]

Play (free, with songs, movement, percussion)
Singing
Story telling
Drawing
Short Trip/Taking a walk
Conversation
Frobel I (box with colored balls)
Frobel II
Construction/Building
Working with Clay
Arranging beads
Folding paper
Cutting, Gluing
Montessori equipments
Free activities

Since then several attempts were made to improve the program, but the basic ingredients remain essentially the same.

Up to 1st of March 1969, there were about 8000 Kindergartens with more than 14,000 teachers taking care of more than 383,000 pupils.

Upgrading courses are given continuously to the Kindergarten teachers two main purposes: (a) to give minimum professional qualification to an increasing number of unqualified teachers, and (b) to introduce kindergarten teachers to new ideas in childhood education.[4]

At the elementary school level, there are two sets of syllabi; one is intended for schools using Indonesian language from the first grade on and the other is for schools using local language as medium of instruction in grades I and II. Except for the language part, all other programs remain the same.

Many Indonesian teacher educators will agree that the present curriculum is a better interpretation of the role the teacher institutions hope to play. In the meantime conferences, seminars and research activities are going on to get far better preparation for further improvement. Curriculum makers are aware that the problem of teacher education is much more than the improvement of the existing curriculum. A favourable climate and a real understanding are prerequisites for any kind of educational change.

As with education in general, teacher education in Indonesia is at the crossroads. Most teacher educators are in full agreement on the inadequacy of the preservice as well as the inservice program. Ever since Indonesian independence 25 years ago, the educational history has witnessed a growth of unprecedented dimensions in education. Quantitatively the growth is tremendous. Certainly, this is one major achievement in the overall development program. Still this is not enough. At the same time there emerge new social and political forces, new aspirations and political forces, new aspirations and value orientation which constantly present new challenges to education. Top leaders and educational decision makers are constantly confronted with the vital need for a reorientation of the basic strategy, goals and objectives, educational structure, the curriculum, facilities and allocation of resources, and last but not the least – the urgent need of highly skilled educational manpower not only at the national and institutional levels but also at the instructional level to ensure the best implementation of the desired reform. In the field of teacher education one can expect a more radical change. More and more people share the opinion that the problem of teachers must be given the highest priority. Their education and professional preparation are of decisive importance in all measures of educational reform. Indeed, there were times when the quantitative aspect was given more weight, at the cost of getting poor quality teachers (in Elementary Schools alone 75% of the teachers are not qualified to do their job).

In spite of the effort to produce more teachers, there will still be a teacher shortage by the end of the Plan. However, while a growing number of teachers has still to be produced every year, there is an increasing awareness that the quality of their education is also a matter of importance, perhaps of greater importance. In order to meet the growing concern of the key educators, the parents, the consumers, even of the teachers themselves, the Indonesian government is taking a serious look at the existing system of teacher education. A national assessment is on the way to study every possible aspect considered of importance in teacher education. It will be too premature to speculate on the findings.

In the first place, the whole program looks very traditionalistic and perhaps best be classified as being truly subject-matter centred. Laboratory experience and practice teaching are given a relatively minor place. On the overall content there is no clear relationship between what the prospective teacher is to master while in training and what he is expected to perform later in the field. In addition, perhaps more emphasis should be given on acute national and social problems, making the teacher institution truly problem oriented. Flexibility should be encouraged to make the program more meaningful for every party concerned. In short, what is needed most is a better policy of and understanding about every possible aspect involved in teacher education and teaching. It should contain a modern approach to teacher preparation, but it should also be such that it is good and workable in the Indonesian setting.

THE SECONDARY SCHOOL TEACHER EDUCATION IN INDONESIA[1]

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PART I THE EDUCATION OF SECONDARY SCHOOL TEACHERS BEFORE WORLD WAR II

As an occupied country, the education of teachers followed the practice established in the mother country. The concept of teacher at that time had a very specific meaning. Probably this concept can be explained in the name of the colonial department which was in charge of educational matters at that time, the Department of Instruction and Religion. In this sense education meant "instruction". This concept was retained until very recently. It was only in the past few years that the Indonesian Department of Instruction, Education became the Department of Education and Culture.

What is the meaning of the teacher as an instructor? A teacher, especially in the secondary school is supposed to be an expert in certain areas of knowledge in which he deserves to be called as an instructor. He is a pure specialist. Before World War II, the teacher as a specialist was completely suited to the need of the system of education since schools and pupils were limited in number. The scope and aims of education were narrow and intellectualism was the idol. To bring the students into the world of knowledge was the sole responsibility of an instructor. The "dual system", general and vocational secondary education, needed a kind of teacher who mastered their subjects thoroughly.

As specialists, teacher education was not the responsibility of the university which desired sufficient general edcuation as a necessary foundation for their education. With in-service training program the expertness needed by the teachers was reached more easily and efficiently. It is not to be doubted that the level of mastering the subject of specialization of these teachers was very high. They were first class scientists in the limited meaning of the term, and in their area of specialization they were even recognized by graduates from the universities at that time.

There were 3 types of certificates for secondary school teachers and also three types of teachers training institutions.

1. The Lower Certificate (L.C.)
2. The In-service Training for Middle-Certificate A. (MC-A).
3. The In-service Training for Middle-Certificate B. (MC-B).

The first type was not institutionalized. The government conducted once a year a state examination which could be taken by practically everybody. A holder of this certificate qualified for teaching in the lower level of secondary schools. The L.C. was granted in several areas such as Malay Language, handicraft, English, etc.

The MC-A was a two-year in-service training program for teachers in certain subject matters. The holder was fully qualified to teach at the junior high school level.

The third type was an extension of the second type – a two-year in-service training program for teachers already possessing the MC-A certificate. At that time there were just two or three institutions offering this type of program most of which were attached to the university. The holder was fully recognized as a senior secondary school instructor.

Besides the above mentioned certificates, most teachers at the Dutch Senior secondary schools were staffed by university graduates even though their number was very small. At the Teachers Training Schools, most of the instructors were MC-A or B holders.

Summary:

Teacher education before the war had the following characteristics:

1. The secondary school teacher was a specialist in a certain subject matter.
2. The teacher was more an instructor than an educator.
3. Teacher education was organized on a kind of in-service training program.

In the following discussions it will be shown that these three aspects are still the foundations of teacher education in Indonesia today.

PART II. THE EDUCATION OF SECONDARY SCHOOL TEACHER IN 1942–1954

The period of 1942–1954 actually consists of two sub-periods, the period of Japanese occupation and the period between 1945–1954. During the Japanese occupation not so many things happened in education except the changing from Dutch to Japanese as the medium of instruction at all levels of education. The number of schools increased, espcially at the secondary level. This raised problems of trying to staff the schools left empty by the departure of Dutch teachers. With the exceptions of a few Japanese teachers, most secondary schools were staffed by Indonesians who were actually prepared an primary school teachers. The shortage of books coupled with in experienced teachers caused serious problems in the quality of education. These conditions remained through the War of Independence Until 1950.

In the meantime, in the Dutch occupied areas, the pattern of secondary school teacher education continued following the pre-war system, while in the Republican occupied areas, teacher education was attached to the first National University, the Gadjah Mada University in Jogjakarta. It was not until 1950, that the Faculty of Fedagogy was established at this University.

After the recognition of independence in 1949, there were two kinds of teachers training programs. The Faculty of Education at the Gadjah Mada University to educate educationists, and the B-I and B-II Courses for training instructors for secondary education – new names for the Dutch MC-A and MC-B Certificate programs.

In the meantime the government introduced plans for a literacy campiagn and enlarged the number of secondary schools. Both created a need for a large number of new teachers. For practical reasons, the staff of junior high schools at that time were filled by the graduates of Teachers Training Schools. Recognizing the greater need for more qualified secondary school teacher within a short time, the government established the Junior High School Teachers Training (JHSTT), a one year program after Senior Secondary School. This was a roplica of the former Low Certificate program. There were then 4 types of teachers training at that time as shown on Table I.

TABLE I. TYPES OF TEACHER EDUCATION TILL 1954

Name of Institution	Length of the Program	Goals	Qualification
1. JHSTT	One year	Subject matter specialist	Teacher at the Junior High School.
2. B-I Course	Two year in-service training	Subject matter specialist	Teacher at the Junior High School with full qualification.
3. B-II Course	Two year in-service training after B-I course	Subject matter specialist	Teacher at the Senior High School with full qualification.
4. Faculty of	Five year university program	Educationist	Teacher, administrator, researcher.

Of these four institutions only the JHSTT remain in operation today. The B-I and B-II Courses were combined to form the Institute of Teaching and Educational Sciences (ITES) in 1962.

The JHSTT as well as the B-I and B-II Courses were in-service training programs, Because of the nature of these institutions, education courses seemed to be redundant. Their programs were tailored to the programs of the same faculties at the universities. The graduates of these institutions were highly respected.

At the Faculty of Pedagogy the aims were slightly different. They were trained as generalists and not to teach certain subject matter except at the Teacher Training Schools, a pattern which followed the continental system.

PART III. THE NEW ERA IN SECONDARY SCHOOL TEACHER EDUCATION

With the fast development of education in the early fifties, the government began to realise that the output of the B-I and B-II Courses was no longer suited to the needs of the country. The government felt that the fast growing number of universities should be backed up with a number of good quality secondary schools which would prepare the future university students. High quality secondary schools students needed high quality teachers. In case of subject mastery, the graduates of the B-I and B-II Courses were well qualified. However, this is not the only requirement of a qualified teacher. Teachers at the secondary schools should also be respected by their colleagues at the university. For this reason secondary school teachers should have a university type of education with an understanding of the science of education.

The first Teachers Colleges were established in 1954; they had two goals:

1. Raising the prestige of the secondary school teachers by providing them with a university level education.
2. Giving more emphasis to the education component in teacher education – something which had been neglected in the former programs.

The first four Teachers Colleges were established in Bandung, Malang, Tondano, and Batusangkar (West Sumatra).

The first goal was greatly needed at that time. It was the period of great growth for state as well as private universities. While the newly born Teachers Colleges were "invaded" by students, educators felt that necessary steps should be taken to protect the teaching profession in this competition since the Teachers College was regarded as unwanted children by the universities. The tradition had taught them that "any body can be a teacher". It was therefore, the first mission of the Teachers Colleges to declare war on this traditional belief.

If the first goal was a war against the outside "world", the second was an undeclared war against the tradition in teacher education itself; this was the most difficult as will be shown later in this paper.

The Teachers College adopted the programs of its predecessors, the B-I and B-II Courses with some additional general education and education courses. It should be noted that the State University of New York or SUNY Team helped these institutions in trying to adapt its content to the needs of the secondary schools and in its program to upgrade the teaching staff. However, fundamental changes did not happened in this institutions because the basic foundations remained as they had been. The Departments were organized according to subject matter. This was also true with the curriculum of each department. To achieve the objective of raising the prestige of teachers, the program was arranged in the traditional way of the universities. It was a common saying that the Teachers College was a "bisex" institution. The results were obvious: the Teachers College produced half educationist and half scientist type teachers – a dubious accomplishment.

In 1961 the Teachers College got its full university status and became a faculty of the state university, the Faculty of Teaching and Educational Sciences. They kept this status less than two years, the Faculty of

Teaching and Educational Sciences became an autonomous institution in 1963, under the name of the Institute of Teaching and Educational Sciences (ITES).[2] The B-I and B-II Courses, which were still in operation, were totally assumed by the new ITES. The merging of these institutions was the result of political considerations operating at that time. Essentially these two institutions had a common program.

The birth of the FTES, and later on the ITES, had several advantages, Dualism in secondary teacher education was abolished, and the universities recognized education as a discipline. It is to be regretted that this favorable momentum was not accompanied by necessary action to improve the contents and aims of the FTES or ITES.

The reasons why internal changes at the FTES or ITES did not happen are many. There were no reasons to justify the separation of the FTES from the university other than political. At that time education was administered by two separate ministries, the Ministry of Basic Education, and the Ministry of Higher Education. The Ministry of Basic Education argued that the FTES did not meet their own needs. Therefore, for their own purposes, this Ministry its own Teacher Training Institutes. This became a political issue at that time and the government decided to establish one institution for all secondary school teachers, the ITES under the jurisdiction of the Department of Higher Education. The consequence of this action was the isolation of the ITES from their consumers – the secondary schools. This wall of separation between the "producer" and the "consumer" remains in the present structure of administration of teacher education as well. (see Figure I).

FIGURE I. THE ADMINISTRATION OF TEACHER EDUCATION INSTITUTIONS

The Minister of Educ. and Culture

The Directorate General of Education

The Directorate of Higher Education	The Directorate of Teacher Education	The Directorate of General and Vocational Education	The Directorate of Technical Education
The ITES	Teachers Training Schools	Secondary, Primary and Vocational Schools	Technical Schools

Figure I clearly indicates the main difficulties in improving secondary education teachers' curriculum. The ITES, which serves the secondary schools, does not have direct relations with these schools. The secondary schools arranged their own curriculum under two separate directorates, the Directorates of General and Vocational Education, and the Directorate of Technical Education. It is now quite apparent that the ITES is moving in own its peculiar direction while trying to maintain the right for existence in the domain not of his own. The ITES considers itself as the supplier of secondary schools teachers but she refuse to admit them on its campuses. This "messy" situation is also intensified by the fact that the secondary schools have but another source of teachers, the JHSTT under the Directorate of Teacher Education.

So far we have discussed the short history of secondary teacher education in Indonesia, its curriculum and organization. It should be noted that the JHSTT and the ITES are institutions for secondary school teachers training in Indonesia at the present time. The former, according to the First Five Year Development Plan will be gradually abolished and integrated to the existing ITES. In the second Five Year Development Plan, which will be started in 1974, the

ITES will be the only institution for training secondary school teachers.

A brief summary of educational reform plans in the First Five Year Development Plan would be helpful for an understanding of the present status and the future prospects of these two institutions.

In the Education Chapter of the First Five Year Development Plan several points having significance for the secondary school teacher education were presented; they included the following observations:

1. The curricula are not in accord with community needs, especially at the secondary schools level. The result has been the production of graduates whose knowledge can not directly be utilised for development purposes.
2. Teaching methods still need to be improved. The present methods of measuring students' achievement, mainly through state examinations, have given rise to bad habits of study and teaching procedures, with the result that students only with the aim of passing examinations.
3. Most of the teachers are unqualified. It is estimated that 75% of the secondary school teachers are semi-or partially qualified. Upgrading programs are necessary.
4. The teacher education institutions must be improved to ensure high teacher quality.
5. More teachers must be supplied to need areas, especially those outside Java.
6. A new strategy for attracting able students to the teaching profession must be found.
7. The ratio between teachers and educational administration personnel must be improved.
8. Educational facilities must be increased.
9. The general schools must be vocationalized by including vocational training as complementary subjects.
10. Student enrollments must be increased.

Within the framework of the First Five Year Development Plan the need for qualified teachers has been given first priority. The resulting policy includes the following porgrams:

1. The intensification of the use of the available capacity of teacher training institutions.
2. The implementing of compulsory teaching for students to fill the shortage of teachers in vocational subjects, technology and natural sciences.
3. The creation of upgrading programs for teachers to introduce them to new and better methods and concepts in education.
4. The integration of the JHSTT into the existing ITES.
5. The reduction of the teacher student ratio to 1:25 (especially in the primary and secondary schools).

These are the programs in the First Five Year Development Plan which show the weaknesses and problems facing the secondary school teacher education institutions, these are likely to continue for many years to come.

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1 Abridged version of the original paper.

2 In Indonesian, Institut Keguruan dan Ilmu Pendidikan (IKIP).

3 *Daftar Rentjana Peladjaran untuk Sekolah Taman Kanak2*, Inspeksi Pendidikan Taman Kanak2, Djakarta 1954.

4 UNICEF plays an important role for the improvement of the quality of preschool education.

CURRICULUM EVALUATION IN TEACHING EDUCATION IN MALAYSIA

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1.0 Introduction

Teacher education in Malaysia is comparable to a three-layered cake where the layers may be separately produced but would have to be sampled together by the consumer. At the base of the hierarchical system are the day training colleges or centres which, until two years ago, required only a Lower Certificate of Education[1] as minimum qualification for entry. In general, the conditions that obtain in primary teacher training institutions, such as buildings and facilities and the qualifications of academic staff, have tended to be inferior to those in secondary teacher training colleges; which are entirely residential and which admit students with at least a School Certificate, the number with a Higher School Certificate increasing rapidly in recent years. The professional training of teachers for the primary and lower secondary classes is in the hands of the Ministry of Education Teacher Training Division, whereas the professional training of the "creamy layer" of graduate teachers who possess at least a basic degree (e.g. in Arts, Science, Economics or Agriculture) takes place at the Faculty of Education which in awarding a Diploma in Education to a graduate teacher virtually certifies that he is qualified to teach in the upper secondary classes.

The importance of maintaining a close liaison between the Ministry and the Faculty of Education cannot therefore be overemphasised, as is evidenced, for instance, by the present joint undertaking. During the earlier years of the Faculty's existence, the relationship between the Ministry and the Faculty tended to be more formal, as when staff of the Faculty constituted a Board of External Examiners for the secondary teacher training colleges. In this respect, Faculty staff were involved not only in moderating examination questions and sample scripts, but frequently in travelling all over the country in order to examine samples of teachers during teaching practice. With the rapidly increasing responsibilities within the Faculty itself and, more important with the build-up of more qualified staff and greater self-reliance in the training colleges, the role of the Faculty became purely advisory while the resources of the colleges were pooled together to form a centralised system of examination.

As another example of the spirit of cooperation, a Teacher Training Policy Review Committee, headed by the Director of Teacher Training and comprising senior officials from the various Divisions of the Ministry and representatives from the Faculty of Education, was established early last year with the following terms of references:-

(a) To define the aims in the teacher training programme in primary and secondary teacher training colleges and to consider the extent to which these programmes are geared to the needs of schools, bearing in mind the changed conditions since 1964.

(b) To review the present courses of studies and syllabuses in relation to the proclaimed aims and in light of the experience of the teacher training colleges since these courses of studies and syllabuses were introduced.

(c) To consider the desirability and feasibility of co-ordinating and integrating teacher training programmes in the secondary and primary training colleges which hitherto have been separate, and bearing in mind also the Ministry policy of producing teachers who are bi-lingual insofar as English and Malay are concerned at least.

(d) To consider the financial implications, i.e. the expenditure, both capital and recurrent, resulting from the proposed changes.

(e) To consider the problem of the availability of staff qualified to lecture in the subjects under the proposed programme, and, if necessary to consider also the need for in-service courses and re-training programmes, for both lecturing staff as well as teachers.

With the untimely death of the late Mr. J.E.B. Ambrose, the previous Director of Teacher Training, in April, with the outbreak of violence in the country in May, and now with new priorities emerging on the scene, the work of the Committee, which included curriculum evaluation in teacher education, is held in abeyance for an indefinite period of time. It is however envisaged that the Committee would soon be re-convened.

2.1 Ministry and Policy

It is perhaps resonable to say that so far the major teacher education curriculum changes have followed important policy pronouncements. A landmark may be considered as coinciding with the publication of the Report of the Education Committee of 1956 (or the Razak Report), which catalysed attempts to coordinate as far as possible the different training courses in order to produce teachers with comparable qualifications through a common pattern of teacher education for service in all Government-assisted schools, irrespective of the media of training. Hitherto there was a proliferation of types of training courses for different types of schools using different media of instruction. The staggering discovery by the Royal Commission on the Teaching Services, West Malaysia (or Aziz Report, 1968) that there were 511 salary scales for teachers and 55 teachers' unions in existence in West Malaysia[2] is probably associated to a large extent with the diversity of training courses offered through the years. While stressing uniformity in types of courses offered, specific variations in the interpretation of curricula were permissible.

Even well after independence in 1957 there have been attempts at revising existing syllabuses and establishing common ones. The Education syllabus for primary teacher education has, for instance, undergone considerable revision in 1963 when a Special Committee was appointed to review the entire primary teacher training syllabuses. With the help of several consultants, mostly psychologists, and after a series of four conferences for lecturers in primary teacher education, the Education syllabus was revised, with an understandably strong bias in psychology. The Education syllabus for lower secondary teacher education was also revised, rather drastically, as a result of the deliberations of the Education Syllabus Committee appointed in 1964. Thus, in order that an integrated approach to education be maintained, emphasising the "application of educational principles to classroom practice and not merely a theoretical discussion of the nature and validity of these principles themselves, the traditional framework of classification by subject was replaced by one which keeps in view the principal interacting variables of Teacher, Pupil, Teaching Method, Evaluation and Setting."[3] An orientation course was also organised for lecturers in secondary training colleges towards the end of 1964 and the comments of the workshop groups were included in the revised syllabus.

Another significant stimulus for curriculum change occured with the introduction of comprehensive education in 1965 where the inclusion of compulsory electives such as Agricultural Science, Industrial Arts, etc., led to an urgent need for teachers capable of teaching these subjects. Furthermore all pupils were given an opportunity to continue up to Form III after primary education, a large number of teachers had therefore to be produced very quickly. The Teacher Training Division of the Ministry braced itself for the event and in 1964 introduced the so-called Integrated Teacher Training Programme whereby each college specialised in certain specified subjects of the Secondary School curriculum, so as to conserve the scarce resources in personnel and physical facilities.

A less popular move was the introduction of the Regional Training Centre Scheme, which had been criticised for the dilution of standards. It is however doubtful that, under the circumstances, any other crash programmes would be capable of coping with the sudden influx of approximately 110,000 pupils more each year for three years, besides the need to provide for the teaching of new compulsory elective subjects. The Comprehenisve Education Committee of the Teaching Training Division was indeed cognisant of the danger of further dilution of standards and recommended that, over and above the training of teachers during weekends while they taught during weekdays with a reduced teaching load, the following measures be adopted:-

(a) The trainees were to be recruited on the same basis as those for training colleges and they were all to sit common examinations;

(b) The trainees attended vacation courses in the nearest teacher education institutions;

(c) The lecturers in these centres attended professional lectures conducted by Faculty of Education staff during vacations.

More recently, arising from a Ministerial pronouncement last year that the national education policy which entails "the progressive development of an educational system, in which the National Language is the main medium of instruction,"[4] would be implemented progressively starting from standard One this year, the urgent need to provide in-service training for teachers in the National Language or Bahasa Malaysia became apparent. It is true that since 1960 all student teachers in primary teacher training institutions were required to offer Bahasa Malaysia as a first or second language, but teaching various subjects using Bahasa Malaysia as the medium of instruction is radically different from acquiring some basic proficiency in the language. It is true also that a large percentage of teachers signified that they were able to teach in Bahasa Malaysia on the basis of a questionnaire administered by the Ministry, but on the basis of the answers to the questionnaires the degree of their professed competence could not be ascertained and furthermore it is not possible to dismiss the fact that fearing transfer some teachers preferred to state that they are capable of teaching in Bahasa Malaysia in the hope that they might be able to pick up the language to adequately teach in it.

In sum, it may be seen that so far, evaluation of teacher education curricula has tended to take the form of reviewing the types of courses offered in conformity with policy decisions. Of late, there has also been considerable changes corresponding to the imminent changes in various school syllabuses. Thus, the staff of teacher training institutions have been preoccupied with conducting, or participating in in-service courses, such as those concerned with the introduction of the Scottish Integrated Science and Nuffield Science syllabuses, into our School system, and making relevant adjustments to the courses they offer in their respective institutions in order to become involved in systematic evaluation of teacher education curricula, such as has been envisaged by the teacher training Policy Review Committee alluded to earlier. While it remains the intention of the Teacher Training Division to re-convene the Committee and to conduct the proposed Teacher Training Survey soon, thereby precluding detailed discussion at this stage, it may be pertinent to mention some of the salient points, in broad outline, that fall within the purview of the Committee.

2.2 Teacher Training Policy Review

The Committee focussed its attention initially on the delineation of aims of teacher education with the view to suggesting practices that would be consonant with these aims. Scrutiny of existing Reports revealed that when a statement of aims was provided, it was often vague and global, such as in terms of producing teachers of the desired quality and quantity. Accordingly, members of the Committee submitted alternative formulations of aims in order to provoke discussion. The Inspectorate, for example, suggested the following three aims:-

(1) "Teacher training should aim at educating trainees in the principles of education in general and the purpose of the nation's educational system in particular so that they will learn the basic fundamentals that will help them to formulate a philosophy of education to guide them as educators".

(2) "To educate teachers so that they will be able to meet the needs of the changing conditions in the country – to fit into the society in which they serve and to foster a national outlook and a realisation of national identity".

(3) "To broaden teachers' outlook with reference to educational systems in the world in general and in neighbouring countries in particular".[5]

Another paper attempted to formulate aims by considering plausible solutions to pressing issues and suggested the following objectives:-

(1) "preparing teacher trainees to be research-minded";

(2) helping them to "seek rapprochement by synthesising and coordinating the best of suggested features into a balanced and harmonious operation";

(3) "inculcating in teacher trainees habits of continual review of whatever they do";

(4) "emphasising the importance of relevance in teacher education courses and practices and the need for teachers to be adaptable to different situations and individual differences among pupils."[6]

The Committee has also prepared a comprehenisve Questionnaire for administration to representative samples of Heads of training institutions, Lecturing staff, Teacher trainees, Heads of Schools and School teachers. The questionnaire aims at soliciting the impressions and opinions of different categories of respondents on current and future teacher training vis-a-vis.

a. curriculum and manifest aims,
b. organisation and policy,
c. methods of teaching and supervision,
d. examination and other evaluation procedures,
and e. staff and students.

Among the many aspects to be assessed are desirability and practicability of a number of propositions such as the following:-

A5 "Each student, whether from primary or secondary training institutions, should be more intensively and extensively trained in only two main (or teaching) subjects, rather than have his efforts spread thin in trying to master the content and methodology of a range of subjects".

A6 "For other main (or teaching) subjects, a series of single lectures should be given in the Education course, wherein the specialist lectures would provide guidelines on crucial points to observe in teaching the subjects, additional notes and references, etc. to enable the student to seek further information and materials on his own, if and when required to teach these subjects."

B5 "Primary and secondary teacher training programmes should be regarded as continuous and articulated and not separate".

B6 "Initially, integration should be one of sharing common aims, having common syllabuses and examinations for basic subjects and perhaps also sharing lectures and meeting socially and professionally, but eventually physical integration of primary and secondary training programmes under one roof is desirable".

C3 "Lecturing staff should demonstrate, either during the lectures they give or in real or simulated classroom situations, the kind of teaching they expect their students to conduct as teachers."

C4 "Lecturing staff should be released on a staggered baiss and in a systematic fashion to teach in schools or to undertake the functions of an inspector of schools for a period of time, once every few years".

D7 "Students of training institutions should have experiences in evaluating themselves and their peers".

D8 "Systematic self-evaluation by lecturing staff should also be conducted periodically".

If and when executed, it is anticipated that the survey would constitute an important exercise in the evaluation of teacher education curricula.

The danger however is that its recommendations might be converted into virtually immutable policies, whereas the Committee has been working under the framework of developing a self-renewing educational system and has emphasised the need for the periodical review of aims and practices and the continual refinement and extension of investigations into the concomitants of teacher education.

3.1 Faculty and Flexibility

Thus far the Faculty of Education has enjoyed relative autonomy in the courses it offers, so that over the past few years it has been able to evolve a fairly flexible system whereby feedback from the active solicitation of opinions from staff and students alike could bring about radical but relevant changes without undue repercussions.

Thus, arising from questionnaire returns from students regarding various aspects of the Diploma in Education programme, frequent staff discussions regarding roles and rationales for avowed goals and priorities, as well as annual get-togethers with Heads of Schools, it has become apparent that there are four categories of needs as provided by the following types of courses:-

(a) *Basic Courses* which are required of all students as minimal for graduate teacher education.

(b) *Additional Courses* which expose students to specialised areas that they may later on pursue for a further degree in education or for further enlightenment.

(c) *General Courses* that widen their exposure to fundamental issues in education, and

(d) *Specialised Courses* that would provide depth in some specific aspects of education.

The kinds of courses actually offered are however derived from the juxtaposition of each of the first two categories with another from the last two categories as shown below:-

	Basic	Additional
General	Principles of Educational Practice	Invitational Lectures
Specialised	Special Methods	Optional Courses

The *Principles of Educational Practice* is an integrated core course, in which every member of staff offers a few lectures stressing the application of psychological, sociological, philosophical, historical and other educational principles to classroom and professional practice. This is the only course which is examined at the end of the year by means of an objective-type paper as well as an essay-type paper. It may be note-worthy that so far the correlations between the two papers have remained rather low, suggesting that some students are better at one mode of testing than the other.

The *Special Methods* are integrated into three cognate areas, namely Language, Sciences and Social Science Methods. Students being trained to teach a given subject, e.g. History, would participate in lectures and discussions on the planning, conduct and evaluation of lessons across each cognate area, besides specialised lectures and discussions for the subject concerned. Assignments for each Methods Course are closely linked with practical teaching of the subject.

The *Optional Courses* consist of the former 20 or so specialised options which have been re-grouped into five studies (Comparative, Development, Pedagogical, Psychological and Sociological) corresponding to the five Divisions of Faculty. Assignments for these courses are research-oriented and based on joint projects under the supervision of the staff in charge of the respective courses. The five Divisions are more than an administrative expedient, for, even though it is a relatively new type of classification, the Faculty is convinced that it has a viable set of main directions, in which, Faculty research is likely to exert its maximal impact. Whereas certain existing disciplines would be confined to just one Division it is envisaged that some others, such as curriculum studies, could span across the five Divisions, in which cooperative projects may be conducted.

In case some members of the audience are unfamiliar with the new terminology, here then are statements about the Divisions in encapsulated form:-

I. Comparative Studies in Education

The disciplines incorporated in this Division will concern the comparative study of various problems in educational systems and organisations from a space-time perspective, with special reference to Malaysia and South-east Asia.

II. Development Studies in Education

The study of the relationship between education and the development of societies through economic growth, with particular emphasis on such problems as the functional role of education and educational administration in the development of human resource for economic growth and social welfare, will be the main concern of this Division.

III. Pedagogical Studies in Education

The focus of the Division is on the development of a theory of teaching through the study of teaching behavior and situations involving specialsied teaching, such as the use of educational technology and the teaching of exceptional children.

IV. Psychological Studies in Education

This Division will include behavioural Science disciplines connected with the study of developmental and educational changes in human behaviour as well as of the measurement and counselling of such changes in behaviour.

V. Sociological Studies in Education

This Division is envisaged as comprising the disciplines arising from or associated with the Social Sciences, such as educational sociology, linguistics, and other studies relating to problems of human orgnaisation and communication, and will focus on the analysis of the complex relationships between social factors and the educational process.

Increasingly more facets of the curriculum are evaluated by a diversity of methods. Sometimes rather formal methods of evaluation are employed, such as the assessment of the relative efficacies of having 10 weeks of continuous practice teaching in the schools as compared with only 5 weeks in school followed by 5 weeks of micro-teaching and 5 weeks of micro-teaching followed by 5 weeks of classroom teaching. Evidence so far seems to suggest that the last treatment is the most effective, but interpretations of the results of the experiment are more involved and hence are beyond the scope of this paper.

More informal procedures, such as having individual discussions with students or a "jam" session with the entire student body to explore their moans and groans, have also been adopted. Changes in the current year's teaching practice pattern are probably attributable in large measure to Faculty's acceptance of the students' criticisms.

The Faculty has also had a chance to assess the strengths and weaknesses of students as a whole by item analysis of the responses to each item or question in the written examination, in particular the objective type paper. Some of the results of item analysis are highly revealing. For example, item analysis of the following item shows that very few students picked C, the keyed answer, with the result that the item has very low facility and a low discrimination between the top third and the bottom third of the students based on the overall score on the objective paper:

> "Which of the following Reports noted that 'a school of Education in the University of Malaya in Kuala Lumpur could play a very helpful part in the organisation of an adequate teacher training programme?'
>
> A. The Higher Education Report, 1967,
>
> B. The Aziz Commission Report, 1969.
>
> C. The Rahman Talib Report, 1960.
>
> D. The Aitken Report on the University of Malaya, 1957.
>
> E. The Razak Report, 1956."

It is amazing that the largest number picked D, followed closely by A, for it suggests that the majority were guessing at the wrong cues, being apparently unaware that the University of Malaya in Kuala Lumpur was established in 1958 in the case of those who picked D.

Another similar example of a low facility and poor discrimination item is as follows:—

> "The most legitimate criticism against automatic promotion is that it:
>
> A. Increases the problems of classroom teaching.
>
> B. Gives pupils an excuse not to study.
>
> C. Gives teachers an opportunity to shirk responsibility.
>
> D. Leads to poor examination results.
>
> E. Overlooks individual differences".

Again, very few, the fewest in fact, chose the keyed answer C. This is symptomatic of the pervading view that automatic promotion is necessarily evil and that teachers are blameless in such consequences as are depicted in responses, A, B, D and E of the question. This is an example of the confusion between means and ends, for it is the predominant attitude of teachers who pass on the buck whenever they encounter a difficult child that is solely responsible for the apparent disadvantages of automatic promotion. This particular example was used as an illustration in a lecture, in the hope that students could learn from the misconceptions of their predecessors.

3.2 Appraisal of Teaching Practice Objectives and Priorities

One area which is undergoing systematic change arising from the rigorous evaluation or review of the Diploma in Education curricula pertains to teaching practice. Earlier attempts at recommending organisational changes have tended to focus on the solution of specific problems as perceived by staff or students. While such an approach is legitimate and even fruitful, the remedies it suggests can lead only to the partial fulfilment of the explicit or implicit objectives of teaching practice.

The Faculty however recognised that until and unless it adopted a total systems approach to the problems which directly or indirectly affect teaching practice, involving, for instance, the clear definition of both our objectives and priorities for the selection of optimal programmes for their attainment, our various efforts may become unrealistic or even futile.

In attempting to derive objectives and

priorities in teaching practice, the basic associated elements were considered to be:

a) Theory or course work from lectures and discussions,

b) individual predispositions arising from previous experiences or observations,

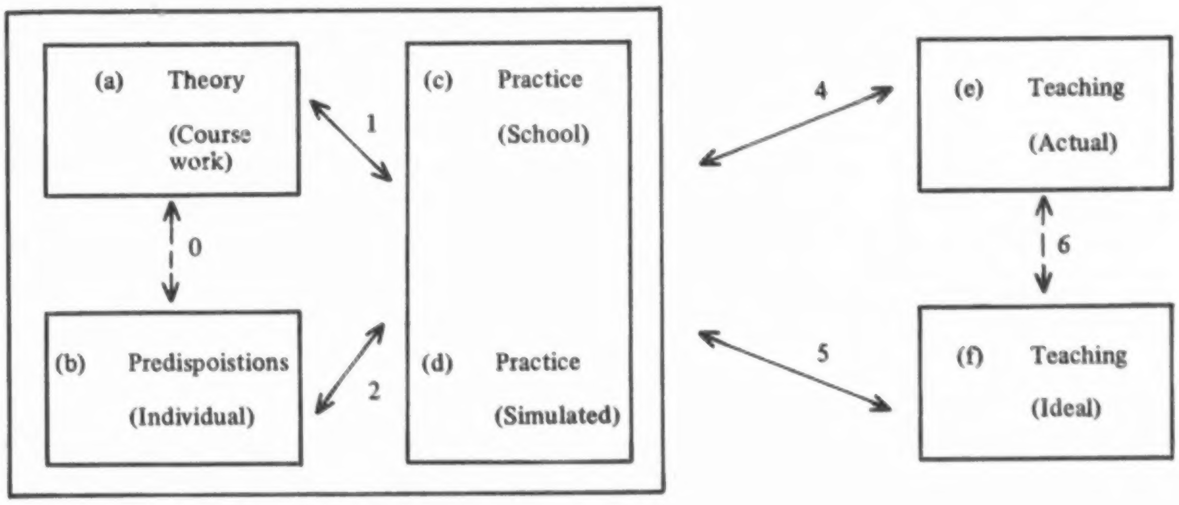
c) the teaching practice experiences in the school,

d) simulated teaching practice experiences such as micro-teaching.

e) immediate future teaching situations under existing constraints, and

f) ultimate future teaching situations under hopefully more ideal conditions.

One way of arriving at the objectives of teaching practice is to consider the interactions between pairs of elements as shown in the scheme below:-



One important objective, derivable from the above scheme, is the intimate interplay of theory and practice. It suggests that there should be a closer tie-up between what are suggested especially in Methods courses and what are expected during teaching practice. Thus, those who are going to be involved in teaching practice supervision must also be intimately involved at least in the formulation of guidelines to be incorporated in the Methods Lectures. More important, ways and means ought to be explored for staff to demonstrate that they do practice what they preach. This may be done either by means of actual demonstration lessons in front of a live class with a few student observers or through micro-teaching, or else by showing that in planning, conducting and evaluating lectures, the Faculty Staff are guided by a similar set of principles which we expect students to adopt when they plan, conduct and evaluate lessons which they teach.

Since students have different backgrounds, in order that our programmes can be made personally meaningful, individualised approaches need to be adopted so that they can proceed at their own pace, perhaps, if possible, by a self-regulated choice of paths. The rigid time criterion which the Faculty has adopted in inflexibly requiring each and every student to undergo exactly 10 weeks of teaching practice is therefore open to question. Instead the Faculty decided that it should apply a performance criterion wherever feasible, so that a student who has reached optimal criterion performance need not be required to undergo further supervised teaching while conceivably there would be some who require a longer period or closer supervision.

Some preliminary analysis of data on the Science students' rating of micro-teaching experiences suggested that micro-teaching is regarded as less interesting, valuable and professionally challenging than classroom teaching practice. Despite the majority indicating that they liked being part of an experiment, they were generally overwhelmed by the artificiality of the situation and were relatively unclear as to the ends to be achieved by the micro-teaching experience. It was therefore felt imperative that, if micro-teaching is to be usefully employed to supplement and complement micro-teaching, there should be closer linkage between the two so that students are enabled to identify specific experiences that are transferable from one situation to another.

The Faculty felt also that the reason why it has been relatively ineffectual in suggesting to the Diploma in Education students the applicability of theory to practice is probably because the practice we refer to is often rather remote from the existing situations in schools, where a variety of constraints operate to prevent – at least as perceived by students – the practice of principles from being meaningful. As long as we urge students to prepare elaborate lesson notes which they know they would not have time to write out as regular teachers, as long as we insist on inquiry methods without showing how with the use of group methods and sampling procedures the syllabus can be "covered" in good time, as long as we stress evaluation and the catering to individual differences without offering positive and specific suggestions that are workable within the limitations of time at the teacher's disposal – as long as we continually fail to take full cognisance of the multitude of constraints which confront a regular teacher, we cannot expect our students to take our suggestions seriously and, at most, they would act in ways which they think would satisfy us for the duration of the course. Hence, a priority objective was regarded as one of gearing the teaching practice experience to the more realistic conditions that successful students would encounter in the immediate future.

Finally, the Faculty felt that it cannot of course neglect the possibility that with improved conditions in schools, some of its graduate teachers may be able to function as effective and creative change agents. For this reason, they must be exposed to innovative ideas and given opportunities to evaluate them. However, the Faculty agreed that it ought to be made crystal clear that it does not expect them to apply all these ideas all the time.

To summarise, in evaluating alternative plans for teaching practice and perhaps other aspects of an overall teacher education programme, the Faculty agreed that it should examine the extent to which the following objectives are likely to be attainable::-

(1) interplay of theory and practice,

(2) catering to individual differences,

(3) close-knitting of microteaching and macroteaching

(4) attention to teaching under existing constraints,

(5) exposure to teaching under idealised conditions.

In accordance with the above considerations, the teaching practice arrangements at the Faculty has undergone a complete change, hopefully for the better. In order to bring about closer correlation between theory and practice, the Faculty has been able, by such means as the pairing up of students in order that they could mutually benefit from joint planning and evaluation of lessons, the use of microteaching and the reduction in the teaching load to a minimum, since it is admittedly impossible to approximate the actual load of the regular teacher – and this fact is emphasised constantly –, to confine the posting of students to schools in the Petaling Jaya, Kuala Lumpur and Klang areas, so as to bring the students back in the afternoon for discussions on the principles of educational practice as well as the practice of educational principles. In addition, through the kind specification of topics likely to be taught during teaching practice by schools earlier in the year, it is possible for staff and students to discuss these "contracts" in terms of structure and sequence, as well as materials required and problems likely to be encountered, well before teaching practice.

With flexibility in arrangements for both microteaching and classroom teaching (or macroteaching), it is possible to cater to the individual needs of students in teaching practice. Thus, in some cognate teams the degree and nature of supervision for students vary according to needs, while in other teams stronger students are employed to assist those who are weaker.

The microteaching is also less regimented than previously practised so that these scaled-down lessons are used only by particular students who wish to practise a few skills at a time. Throughout emphasis is made concerning the extent to which the microteaching and macroteaching situations are similar or different so that the strength's of microteaching may be capitalised upon while its weaknesses could be used as take-off points to discuss what adjustments are needed in the real classroom situation.

With the reduction of the number of periods required for teaching practice, it is similarly stressed constantly that in the actual situations, with heavier load, crowded syllabuses and large classes especially, special arrangements are needed and from time to time the attention of the student teachers are drawn to finding promising practices to overcome pressing problems of the classroom under existing constraints.

At the same time, since opportunities often arise when teachers may have some occasion to engage in more time-consuming preparations of instructional aids or the schools may have such equipment as projectors and tape recorders, the students are all exposed to a basic audio-visual course. Judging by the number of students who turn up at the AVA workshop each afternoon or weekend, and by the more extensive use of instructional aids this year, it may tentatively be inferred that this venture is quite successful.

4.0 Some Concluding Remarks

In this paper we have attempted to provide brief glimpses of some of the processes and products of curriculum evaluation in teacher eudcation that have taken, or are likely to take place in Malaysia. However, if we define curriculum evaluation, as we think we should, as the systematic and continuous process of gathering relevant descriptive, explanatory and/or predictive data in order to aid decision making with respect to the curriculum, then our recent attempts are far from satisfactory, even though we seem to have gone a long way from the pre-Independence ad hoc arrangements based on practically no evaluative information regarding the appropriate curricula for teacher education.

We still need better conceptualisations that will aid us in continuing to collect useful data unimpeded by unavoidable constriants such as new policy pronouncements or disproportionate increases in responsibilities elsewhere. Perhaps better coordination among the different agencies that have a stake in the ultimate production of an effective and efficient teacher is necessary. There ought also to be continuity in the information available from separate agencies who deal with a potential or trained teacher at different times of his life span. In terms of a teacher education institution, incoming background data and outgoing follow-up data are as important, if not more important, than the transactional data which we tend to accumulate. Perhaps too, a much neglected area involves the process of communication concerning the importance of and results from curricula evaluation in teacher education. We need to convince both purveyors and consumers of curricula in teacher education not only of the need to evaluate but also of the importance of evaluating accurately and adequately, systematically and continuously. Much remains to be done in the evaluation of teacher education curricula in Malaysia by way of fostering better conceptualisation, coordination, continuity and communication.

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[1] In Malaysia, primary schooling comprises six grades (Standards 1–6), after which pupils can proceed automatically up to Form III where they sit the Lower Certificate of Education public

examination. Usually less then 20% would continue with Upper Secondary education, terminating either in a School Certificate at Form V or with a High School Certificate after a further two years at Form VI level.

2 *Report of the Royal Commission on the Teaching Service, West Malaysia.* Government Printers, 1968, p. 2.

3 *Report on Education Syllabus for Secondary Training Colleges and Regional Training Centres.* Ministry of Education. p. 1.

4 *Preamble to Education Act,* 1961.

5 Chang, Paul. *"A Paper Prepared by the F.I.S. on the Review of Teacher Training Policy"*, 1969.

6 Sim Wong Kooi. *"A Preliminary Statement on the Rational Formulation of Aims of Teacher Training in Malaysia"*. 17th March, 1969.

EVALUATION OF TEACHER EDUCATION CURRICULA

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The favorite model for curriculum evaluation is the one used in industry, viz., measuring the product against the function it is supposed to perform. For teacher education curricula following this model would yield the question: Does a given curriculum perform its function of producing teachers who, in turn, perform their function, viz., produce good learnings in their pupils? The application of this design has been hobbled by our inability to agree upon any significant criteria for good teaching and for good teachers.[1] In this field of inquiry mountainous labors have produced puny mice, so that one recent well-known summary of research concluded that "There are no clear conclusions."[2]

This is hardly surprising if one thinks about the nature of the research into this problem. For the most part, it has consisted of asking school administrators, supervisors, teachers, prospective teachers, teacher educators, pupils, parents, and almost anyone else willing to answer a questionnaire, what they regarded as the characteristics of the "good" teacher; what courses they regarded as most or least useful. In as much as this wide variety of personnel occupied a wide variety of roles in the educational enterprise, and therefore viewed it from the perspective of their individual roles, it could be expected that the list of traits would be large and the organization of them into some explanatory scheme would be well nigh impossible, even if semantic uniformity with respect to the terms could be achieved.

Perhaps it is time to turn back from this blind allay to ask afresh: "In what sense can one regard teaching in general and the teaching of teachers as a linear, clearly identifiable process?" Perhaps an understanding of this query will lead to a more realistic model for evaluation of the teacher education curriculum.

Levels of Process

For one thing, the process into which educational research has been probing is not a physical process such as oxidation, the circulation of the blood, or the growth of corn. If it were, it hardly could have eluded so eager and massive a search by methods alleged to be rigorously empirical and scientific.

There is, I am sure, a physical process at the basis of learning. In another 25 years or so, conferences on teaching-learning may well be addressed by neuropharmacologists who will propose the control of learnings by drugs; brain physiologists who will be able to stimulate neural regions to control learning, and computer scientists who will have created astonishing analogues of the human brain. May I suggest that if this is the kind of process we have in mind when we talk of teaching, we would be well advised to leave it to the physiologists, chemists, and neurologists to investigate; educators will not find the answer to this kind of secret.

The kind of process that educationists do investigate has a psychological texture. This process presumably supervenes on the physiological one and has for its elements, rather than cells, molecules, and atoms, ideas, images, feeling tones, etc. If we could only ascertain the laws of succession of these elements, we could control and predict the flow of experience in the pupil.

Well, we do have generalizations of this kind: the laws of assoication of ideas is one; Gestalt theory has contributed some others; Freudian theory offers us an hypothesis, and, of course, operant conditioning still another. We do have educational theories based more or less on these and similar learning theories. Why, then, is our problem no nearer to solution?

One answer, of course, is that the kind of learnings we promote in schools involve many more factors than the learnings of experiments on which these theories (Freud excepted, perhaps) are based. If the goal of schooling were to teach only maze running skills, for example, there would be no great difficulty. Neither would there be an insurmountable problem if teaching were reduced to the application of reinforcement schedules so that preprogrammed responses of any sort would be facilitated or inhibited. Unfortunately it is easier to devise mechanical models of teachers than of pupils, and strangely enough, if we were successful in producing men and women who were perfectly efficient teaching machines and pupils who were perfectly efficient learning machines, we should forthwith disown both as monstrous.

The more obvious reason for this reaction is that human learning means learning something more than a repertiore of responses with which to respond mechanically or even logically to stimuli. Human learning, we like to think, is a liberation from such robot-like responding; not an abandonment of correctness, to be sure, but a freedom to reconstruct the pattern of response in terms of foresight, aspiration, imagination, and commitment. Now so long as one thinks of teaching-learning as a psychological process that can be described as an invariable series of causally related events, the model is a machine, and teaching is a form of human engineering. This concept of human learning, however, is precisely the one which evaluators of the curriculum at any level of education are anxious to deny.

Again, I have no doubt but that learning-teaching can be described as a procession of psychological events, and that these in turn can be traced to physiological events. But there is a sense in which psychological analysis of learning tell us much more than we want to know about phenomena in which our interest is relatively low, e.g., rats running mazes, learning non-sense syllables, salivating dogs, reaction time to various stimuli, and the like. This does not denigrate the scientific import and interest of such studies, but about school learnings in real school situations they tell us little that teachers do want to know about. In other words, "human" learning operates in a domain in which meanings rather than events as such are central. Supervening upon the physiological and psychological series of events is the realm of meaning or human import. The important point about this realm is that meanings are not related to each other causally as we believe all events to be. The lightning causes the thunder, the pull of the moon, we believe, causes the tides, and the repetition of a response causes it to be "fixed." But there is an important sense in which 2+2=4 is not the cause of 4+4=8. The relation between these two concepts, we say, is logical. The relation between the meaning "democratic society" and "representative form of government" is not one of cause but logical; the relation between the meanings of "rose" and "beatitude" is not causal but poetic. The relation between the meanings of "commitment" and "ideals" is moral rather than causal.

Moreover, we can understand the meaning of the multiplication table without knowing what events in the brain are occurring when we understand it; the fragrance of a rose is not equivalent to the organic processes by which roses grow. Conversely, not all the knowledge about how people learn to love their neighbors can give us any valid reason for loving them, much less give rise to the notion that one ought to love them.

The great intellectual disciplines are systems of such meanings, and they are not organized on the basis of psychological laws, but on logical, moral, and aesthetic ones. If formal schooling has as its major goal the organization of pupils' experience so that it becomes organized as analogous meaning systems, the guidance from physiology and psychology for teaching is far from sufficient.

There are, then, at least three levels on which human learning occurs, and they may be illustrated by a man reading a sign which says, "Twenty miles to Paradise Hotel." At the physiological level, his eyes and brain – as well as the whole chemical system of his body – enable him to form images of the letters on the sign. Psychologically, a series of images and ideas are initiated (according to the laws of association, etc.) by which he translates the letters into symbols. And finally, at the third level, he construes the meaning of these symbols in terms of their import for him as a traveler.

It is to be noted that each level depends on the one beneath it for its existence, yet cannot be reduced to it. Somehow to say that my toothache is nothing more than the excitation of a nerve net is to say something false, even if we do not doubt that without such an excitation there might be no toothache. The psychological level adds consciousness to the physiological level and therewith a new dimension. The meaning level adds human purpose to the psychological and physiological dimensions of experience.

Because the upper two levels achieve a measure of what Gordon Allport called "functional autonomy," the laws of each level can only provide limiting conditions for the events in the one above it, but give no way of predicting and producing any specific event. Thus the laws of mechanics cannot be violated if we are to construct an efficient automobile, but no amount of knowledge of mechanics can prescribe that one should build automobiles or which kind of automobile one should build. For this we need the category of human purpose. Similarly, good teaching cannot violate psychological laws, but from these laws very little can be predicted or prescribed in the way of curriculum or teaching strategy. It is as if the traveler reading the signpost who did not understand the language in which it was written asked about its meaning and was given a lecture on the laws of optics by which the letters became visible.

Accordingly, while one may think of the teacher education curriculum as a cause of the teacher performance and the teacher performance as a cause of the pupil performance and seek generalizations about the causal sequence, it may be a little beside the point to do so if the important transactions in human teaching and learning are carried on within the domain of meanings. The really significant relationships may have to be sought in the meanings systems that have organized our culture and the way in which individual human learners use them in organizing their own experience.

Content and Method

The standard division of the teacher-training curriculum into content and method assumes that *what* is to be taught to the pupil can be taken from the realm of meaning and import, while method is a set of procedures that is justified by psychological principles of learning.

However, if we have learned anything from the recent development in curriculum, it is that these notions of content and method are far too simplistic. If method is a way of teaching, then it includes more than psychologically based techniques. For example, when one uses logic to help explain the new mathematics, this is not a technique in the ordinary sense of the word, and it is not psychological. The logic is itself a content – a cognate content – but it is not included explicitly in the content which is taught to the pupil. The methodology of teaching has to include a special kind of content and is therefore more than applied psychology, whereas the content has to go beyond what is taught to the pupil, i.e., it is more than a slab of replicable subject matter. If we are to broaden the concepts of content and method, there will be corresponding changes in the curriculum for teacher eudcation and in the criteria for evaluation of the curriculum. As far as cognate content is concerned, it is not safe to take for granted that content for *teaching with* will be acquired as part of the general education of the student or by highly specialized study of a given subject. In the United States, at least, there is no uniform pattern of requirements for general education, while advanced work in a subject is more adequate preparation for research and scholarship in a subject than for teaching it. The role of cognate content in the training of teachers is an important issue and is one of the more promising areas in which educationists and subject matter scholars can collaborate. In the new standards for the accreditation of teacher education in the United States, cognate content or special content is recognized as part of the professional curriculum.[3]

As for methods, there are too many confusions and issues to be discussed even in one book, let alone in a paper of this kind. However, as pertains to evaluation, the issue, it seems to me, lies in a choice between "methods or techniques" on the one hand, and "methodology or technology" on the other. The suffix derived from *logos* is crucial because it refers to the role of theory in teacher training, and, accordingly, it is the pivot upon which one evaluates a curriculum as being of professional grade or not. These notions, in turn, are related to the amount of autonomy teachers can demand in the exercise of their functions.

Two sorts of question arise in this connection. How professional, i.e., just how theory-based can teacher training curricula be, and how far ought they to be? The argument for the professional curriculum is based on the assumption that rule-following technicians will not be flexible enough to meet the complex and shifting demands of the learning situation. How can the modern teacher take account of the individual differences of his pupils, how can he take account of cultural and economic factors in the learning situation, how can he manage the knowledge explosion by following rules?

The Pivotal Role of Theory

If the modern demands on the teacher are to be taken seriously – and what these demands are can easily be inferred from the troubles in our schools and colleges and in the social and political turmoil of the day – then there is no alternative to a curriculum in which theory that enables the practitioner to be rational about rules plays a prominent part. But what sort of theory is available for this purpose?

By "applying theory" one usually has in mind something like the use of chemical theory to guide the manufacture of synthetic fabrics or the science of mechanics to guide the work of the engineer. Let us call this *applicational* theory. In education this might be represented by the application of the Skinnerian theory of operant conditioning to the designing of teaching machines. Or one might formulate rules of class management from the principles of group dynamics. Alas, the amount of empirical theory that can be applied to practice in education in this way is pitifully small, but whatever there is of it certainly belongs in a curriculum that has any pretensions to professional calibre. These constitute the behavioral foundations of teaching.

For the most part, however, the theory that one finds in the teacher training curriculum is of another sort. Principles of education, philosophy of education, social foundations of education, history of education are some of the more common titles. They purport to place the aims of education, the curriculum, the teaching-learning process, and the organization of the schools in a rational context with the aid of concepts from the parent disciplines. To do this, the nature of man, the nature of society, the relation or lack of relation to God are made explicit. At a somewhat lower level of generality, the place of the school in the social order and its role in creating and dealing with the problems of the society are discussed. The degrees of rigor, order, and sophistication of these courses vary over a great range – from common sense reflection on life to technical treaties.

It should be noted that in these courses the type of theory is not empirical in the sense that a physical science or even a behavioral science claims to be empirical. Aside from history, there is no close relation to fact; the social theory is based on social philosophy rather than an empirical sociology; the psychology is more philosophical than derived from laboratory experiments. There is also a good deal of philosophical anthropology.

From such general humanistic studies no rules for pedagogical practice can be deduced without a generous use of the imagination. Consequently, their usefulness for the teacher is questioned, especially by the prospective teacher. Some critics say they should be eliminated altogether, and that the teacher's general education will take care of providing this sort of background. Others, who sense some value in these studies, believe they can be postponed until after the teacher has acquried some experience in the classroom – postpone, so to speak, for in-service training. On this view, the pupils taught by the beginning teacher presumably can forego this value.

The point, therefore, is whether these studies are useful in some sense other than as a source of rules to be applied to practice. This is an issue in all general studies, and in the role of foundational studies in any professional curriculum. The most plausible defense of them is to point out that they provide the *context of practice* rather than the *rules for practice.* Thus understanding the sociology of poverty does not directly give rules for healing the diseases of the poor, but the dietary prescriptions that a physician might give to the poor will avoid serious errors if he does understand the social dimensions. Knowledge of social context therefore affects the general strategy of education, of appraising the teaching situation in many dimensions, and for making decisions that take account of these dimensions. It is what Karl Mannheim referred to as "correlational thinking" as opposed to the linear thinking of the technician.[4]

Now it may be – and one devoutly hopes that it will be soon – that the behavioral sciences of empirical psychology, sociology, anthropology, and the like will provide educationists with more applicational theory from which rules of procedure can be derived. This would provide us with a methodology and technology. But as matters now stand, the applicational theory is not very significant whereas the interpretive theory derived from the humanistic disciplines is plentiful but not applicational in the ordinary sense of the term.[5]

There are really no satisfactory responses to this predicament. First, one might promise that the humanistic foundations (interpretive theories) can be applied and that study of them will help the teacher in solving everyday problems. Such promises are the rule rather than the exception, but they merely embitter teachers when the promised help does not eventuate. This bitterness is then reflected in the judgment that teachers pass on their teacher training programs. In answer to questionnaires, they dismiss virtually all theory courses as a waste of time because they gave no immediate help in keeping order in the classroom, in finding recommended materials in impoverished school systems, in motivating children from homes in which school learnings were not highly esteemed.

Second, there is the alternative of eliminating all theory and reducing the teacher training curriculum to the practice of rule following. On this alternative, one might still claim that the training was professional or candidly admit that it was not. Either of the latter choices is an abandonment of the professional ideal, but the latter one is more honest.

Among these responses I believe that the most preferable is to admit that we must rely pretty heavily on interpretive theory, but to stress the need and usefulness of such theory in setting our educational problems into their appropriate context – psychological, historical, philosophical, societal. Together with the cognate content, these constitute the concepts one *teaches* with. That they cannot be applied in the ordinary sense of prescribing rules of procedures does not make them useless, but it is a use of which the user is very often unaware until he compares himself with others who do not have this context-building materials, or until in his own teaching he reaches an impass because there is a gap in context that he cannot remedy.

The importance of interpretive theory is witnessed by the almost frantic attempts of such well-established professions as engineering and medicine to correct the social and philosophical myopia of their members as regards context relevance. For teaching the need is even more urgent because its only alternative to this kind of theorizing is mindless rule-following or trail and error.[6]

Next in order to preference is the frank abandonment of the professional ideal and to train teachers to the rule-following level of competence.

The rule-following teacher needs (1) to know rules that cover the various classes of teaching situations and (2) sufficient familiarity with a wide variety of classroom situations so that he can choose the appropriate rule. The type of training required for this sort of competence would have to provide for (1) familiarity only with the content or tasks to be taught, (2) practice in as wide a variety of situations as it is feasible to provide, (3) sufficient guidance to familiarize the practitioner with the "right" procedures and the rules that determine which procedures are "right." This kind of competence roughly corresponds to what is expected of a craftsman, a mechanic or carpenter who receives his training by apprenticeship.

This model of the classroom teacher – which to my mind is far better than a pseudo-professional one – is much appreciate both by teachers and by school administrators. With time, the teacher can coped reasonably well with all standard situations. He can control the classroom, keep activity orderly and moving forward, use prescribed textbooks and follow teacher guides. He acquires the confidence and competence that comes from familiarity – from recognizing a situation as being one "like the one I had at such and such a time." Even high-level professionals would not swap this sort of experiential familiarity for a book full of brilliant theory. Certainly if we are about to undergo surgery, we would feel more assured if the surgeon were longer on practice than on theory. And, of course, this makes sense, for to have had a long professional career means to have survived a great many trials with no errors sufficiently grave to have driven one out of the profession. Furthermore, children's learning problems, like their other ailments, tend, for the most part, to be standard ones. Hence the great preference for practice and experience. If one were to name the one most pervasive criticism of teacher education – at least in the United States – it is that the beginning teacher has not had sufficient familiarity with children and classrooms; that his work at the training school was too theoretical, i.e., too remote from the concrete problems of the classroom. Hence most of the innovations proposed in teacher training in the United States are schemes to increase the student's familiarity with the problems of the classroom as soon as possible and to stay with these concrete situations as long as possible. While apprenticeship is the most obvious way of accomplishing this, electronic simulation as in microteaching is a popular surrogate.

The drawbacks to a teacher-training curriculum that consists solely of practice and rule following is that (1) it provides no intelligent way of coping with the non-standard situation – and each situation is in a sense non-standard, and (2) unless the teacher builds up through intuition a sensitivity to the need for context, the teaching becomes mechanical, wooden, and leans increasingly to rote performance of one kind or another.

Evaluation Strategy

It should be clear, therefore, that the first act in the evaluation of the curriculum is to ascertain the claims that the institution makes explicitly or implicitly. If it claims to provide a professional curriculum, then one has a right to expect a full panoply of the humanistic and behavioral foundational studies, context to teach and cognate content to teach with.

The foundational part of the curriculum might well be common to the preparation of all educational workers, for at the professional level it is reasonable to expect that teachers, administrators, supervisors, and counselors will become apt in supplying the philosophical, historical, societal, and psychological contexts for the standard problems in education. I have in mind such problems as those pertaining to the formulation and justification of aims, curriculum, organization of the school system, and, of course, teaching learning.

But at the professional level there has to be a segment of the curriculum – the largest perhaps – which deals with the problems of practicing one's specialty: elementary teaching, or the teaching of reading, teaching handicapped children, supervision, etc. It is in this segment of the curriculum that methodology (not simply method) based on as reliable knowledge as we have finds its place. In this section of the curriculum we can distinguish (a) theory-laboratory courses pertaining to such aspects of one's specialty as the choice of materials, evaluation and testing, lesson planning, classroom management, (b) clinical experience, in which real individual situations are studied under the supervision of the master teacher, (c) internship, or experience in a real school with relatively little supervision, (d) experience in research, primarily as a consumer but with some work as a producer.

If, however, the curriculum makes no such professional claims, what has been said above about the requirements for rule-following could constitute the whole curriculum, and it could be evaluated in these terms. Even here it would be dangerous to follow. If the process-product is the pupil of the teacher being trained, then all sorts of variables that have little to do with the training program become operative. However, one can demand that the rule-following knowledge and procedures be tested at the end of the teacher training program –a sort of end-of-course type of evaluation.

Role Differentiation

As long as the ideal of a high-grade personality skilled in the art of teaching for every classroom persists, there will be great resistance to admitting that claims to providing professional training has been abandoned. Instead there will be the temptation to substitute rhetoric about the love of children and the nobility of the teacher's calling for the time and intellectual quality needed to carry out the requirements of a truly professional curriculum. As between pseudo-professional programs that produce teachers who are neither professionals nor good technicians and those that really turn out good technicians only, the latter, it seems to me, are preferable. This alternative would mean, however, that the non-technician competance that we seem to want in our schools would have to be provided by a different set of personnel.

It may be that no country – even the richest – can afford the resources needed for providing a fully professional teacher for every classroom, and it may be that if we could train technicians for most classroom functions, we might be able to afford a much smaller cadre at the professional level for decision-making, supervision, and those aspects of education that involve the person-to-person encounter as an essential component. I have in mind conseling, group and individual, discussion, seminar work, project development, etc.

One such possibility is to give over didactics, i.e., explicit instruction of explicit content to programmed learning, with or without the aid of machines. Teachers trained to the rule-following level could manage this aspect of instruction, and they could be trained to this level with probably no more than two years of post secondary work.

Some of these "encounter teachers" might be trained in the fashion of social workers and psychological group counselors; but others might qualify by experience with children and youth in various forms of community work. The attempt to combine skill in didactics and human relations in the same person has been not the least of the causes of the failure of teacher training programs. Combining disparate requirements merely reduces the chances of finding them in many individuals. Didactics asks the teacher to function as an efficient machine; encounter teaching as a warm, sensitive, concerned person. Most teachers worry about didactics, and quite predictably they act as fairly inefficient machines. The chances for a well programmed machine providing highly individualized instruction in didactics are better than for a live teacher doing so. But machines cannot deal with persons as persons because they are not persons, but neither can live teachers deal with persons as persons unless they themselves are rather special kinds of persons. The number of human beings who can qualify for both types of teaching is bound to be far smaller than one would desire. Hence most teachers are unsuccessful teachers and inevitably the curriculum of teacher training institutions is blamed for the failure.

Summary

Evaluation of curriculum of teacher education, I would conclude from these considerations, cannot be carried on by simply aping the process of product evaluation in industry. Instead one should differentiate, in the first place, among the levels of training to which the institution appires. In the second place, within these levels the general criterion might be the extent to which a curriculum contains those ingredients or components of content and method that a teacher needs to teach and to *teach with.* Finally, the evaluator might well examine the provisions the curriculum makes for didactic teaching and encounter teaching and the claims it makes for each.

Can one identify these components of the curriculum in the product? Some can be identified at the end of the training, e.g., the content and techniques. Other components, however, operate tacitly, especially those components of the curriculum that we have referred to as cognate content and interpretive theory. Evidence of these elements may not be easy to find, for the user of these in many instances has to forget them *explicitly* in order for them to function *tacitly.* Only when the user is compared with a teacher whose training did not include them is the difference apparent. Above all, the role of evaluation is to prevent student, institution, and the public from accepting a pseudo-professional curriculum for the real thing.

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CURRICULUM EVALUATION IN TEACHER EDUCATION IN THE PHILIPPINES

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It was with great pleasure that the Philippine Government accepted the invitation of the Faculty of Education, University of Malaya and the AACTE to participate in this conference on "Evaluation of Curriculum on Teacher Education." We congratulate the planners of this conference for selecting a very fitting theme. Never before has the role of the teacher been challenged so vigorously. This may be attributed to the dynamic forces that are changing our society with bewildering speed. As educators we are at once observers and participants in this complex phenomenon.

The birth of new nations in Asia, Africa and other parts of the world has intensified the feeling of nationalism amongst our peoples. Our countries have entered a new period of economic, social and cultural development at a relatively fast rate. Student power and activism have spread on our campuses. Our students have articulated both their own as well as the people's grievances because they have been provided with a means in their education. They have come full circle because, finally, they are questioning the relevance of formal education itself. As educators, we realize more than ever before, that our students, at all levels, cannot and should not be taken for granted. All these forces have impinged on our post World War II society.

The teacher is the key to the educational process. His responsibility to the student is the most important element in the educational enterprise. The quality of his education, as provided in teacher education institutions, is of paramount importance in planning educational reforms; for no scheme of school or curriculum change can take the place of good teaching.

We are witnesses to examples of misdirected teacher education in former colonies and developing nations. As a result of alien perspectives foisted on their cultures and educational systems, such countries now find themselves at the crossroads, seeking new directions.

This is indeed a difficult task confronting those whose job it is to charter the course of teacher education in these countries. The impact of alien culture, standards and objectives, the temptation to resort to short-cuts, the pressures on educational systems from within and without, and worst, the indifference to the need for developing indigenous programs, may militate against reforms in teacher education in these countries.

However, this conference as well as others held in the recent past is indicative of a positive trend in teacher education. In the Philippines, our thinking and efforts to review and improve our teacher education curricula have been summarized by the Secretary of Education, Dr. Onofre D. Corpus, in his address at the opening ceremony of the Regional Meeting of Teacher Educators in Asia held at the University of the Philippines on September 23, 1969, as follows:[1]

> " We are looking forward to a situation where our teachers are trained to teach our pupils Philippine studies that will stamp our education with the spirit of Filipinism, the ethics and character training that will be conducive to order in our society, and the science and technology that will generate that tension between tradition and modernization to produce progress. In short, we hope to achieve a focus on our national culture, stability in society and tension that is the prerequisite and character of development."

These ultimate goals of teacher education harmonize closely with the objectives of education as provided for in the Philippine Constitution which are to develop moral character, personal discipline, civic conscience, vocational efficiency and to teach the duties of citizenship.

A. Status of Teacher Training Institutions in the Philippines

Today, there are 320 teacher training institutions in the Philippines. Eighty-nine per cent of these are privately supported and the rest are state endowed. Their annual output is 50,000 graduates out of whom 90 per cent come from private institutions and only 10 percent from state-supported schools. Of this number between 12,000 to 15,000 can be employed. While there is an oversupply of teachers, there is an undersupply in certain subjects such as science, mathematics, art, music and social studies.

The General Education Policies report of the National Board of Education in 1958 states that the teacher education program should provide prospective teachers with the following:

1. A broad general education.
2. Intimate knowledge and deep understanding of children and of the most effective means of helping young people develop and learn to the fullest.
3. Resourcefulness and proficiency in the preparation of curriculum materials and in the use of local community resources for vitalizing and enriching the education of children.
4. Knowledge and understanding of the needs, materials, methods and psychology of fundamental and adult education, including arrangements and procedures for the continuing education of dropouts.
5. Understanding and knowledge of the dynamics of the democratic group process and skill for their utilization in group thinking, decision and action.
6. Adequate professional laboratory experiences in school and community including off-campus student teaching in typical community schools.

This paper was prepared on the basis of the following permises:

1. There are compelling reasons for an evaluation of teacher-education in the Philippines today.
2. Evaluation of teacher edcuation programs must be done within the context of unique Philippine conditions, needs and goals and at the same time keep within the framework of generally accepted principles in teacher-education.
3. For the benefit of all, teacher-education institutions must share their experiences, resources, facilities, and expertise to strengthen their curricular offerings.
4. Curriculum evaluation in teacher-education must go hand in hand with effective measures of recruiting, admitting and retaining capable young people in the teaching profession.

B. Need for Curriculum Evaluation in Teacher Education in the Philippines

A carefully planned and systematic reappraisal of teacher education is an imperative in the Philippines as it is in other countries today. Several reasons may be cited for this but perhaps there will be singled out:

1. The demand for change and for relevance to basic goal.

Student activism is deeply rooted in the students' demand for changes in curricular offerings and academic requirements to make these more relevant to the times. In a developing country like the Philippines where national development is the basic goal, it is necessary to look at teacher education in the light of its contribution to this goal. Of course this will also mean a study of the meaning of national development in order to determine better the skills and knowledge teachers need to be able to contribute to its attainment. But national development is so much rehtoric unless we can specify its particular meaning for teacher education. To the degree that teachers can stimulate a vigorous spirit of inquiry, of willingness to experiment, to venture into hitherto unexplored fields of knowledge, to that extent it would be contributing to national development. Teaching is indirectly but significantly related to the urgent need to find a niche for every individual in a developing country's economy.

2. Changing and expanding role of teachers.

It is a truism that changes in society affect schools and society's expectations of teachers. Roles of teachers are increasing in variety and complexity. The traditional function of schools has been the conservation and transmission of cultural heritage. To this was added the function of providing the students with skill and knowledge to cope with changes and to think for themselves. What experiences should be included in the teacher education program to develop among prospective teachers an adequate understanding of these complex and multifarious roles?

To what extent is the teacher education program helping prospective teachers "become" teachers rather than merely teaching them how to teach? Has it considered the adoption of the "self as instrument" concept to teacher-education?[2]

3. Curriculum development and research in the different subjects and related disciplines.

In countries like the United States, the last decade has witnessed tremendous curricular development in the different subjects. Research offering new insights into learning, structure of subject matter, cognitive organization, readiness, motivation, teacher behavior, and classroom communication are ongoing studies. In the Philippines since the middle 60's several agencies have also been involved in curricular projects especially in the sciences, mathematics, health education, social studies and English. Have teacher-education programs been cognizant of these developments and of research?

C. Status of Curriculum Evaluation of Teacher Education in the Philippines.

To date, no systematic, coordinated efforts to evaluate Philippine teacher education can be reported, be it on a national or school level. However, some past attempts to study the problem on selected aspects might be mentioned.

One such attempt is the study of the professional preparation program of the Bachelor of Science in Elementary Education curriculum in 1968 at the University of the Philippines.[3] Its objective was to determine how students, alumni and faculty members view the professional preparation program of the BSEEd curriculum. The study also attempted to get their view of the proposed program.

This study was limited to the professional courses in the curriculum. On the basis of criteria adopted for the professional preparation of prospective elementary school teachers, a questionnaire was prepared. Twenty students, twenty three alumni and ten faculty members constituted the respondents.

At this juncture, it should be noted that the BSEEd program in the University of the Philippines was initiated only in November 1961, and has not attracted a sizable number of students. The present enrollment is only 17, a very small number when compared to Bachelor of Science in Education program for future secondary school teachers which has an enrollment of 110.

Findings based on the questionnaire showed that the alumni tended to think more favorably of the program than the students. Attitude levels ranging from favorable to highly favorable were observed regarding the different professional courses.

On the whole, the respondent group favorably rated the professional preparation program.

The conclusions arrived at reflected certain needs among which are a need for a continuing evaluation of the program by the college staff and alumni, a need for more relevant involvement of laboratory school teachers in the teaching of professional courses like the methods courses and a need to study the possibility of a major in the BSEEd program.

This study was cited because, while it was limited to the professional preparation program, it attempted to involve the different groups of respondents in line with our democratic values.

Another survey worth mentioning is the study of the teacher education programs in the sciences and mathematics conducted in 1968–69 by the National Science Development Board and the Science Education Center of the University of the Philippines in cooperation with the Department of Education.[4] One purpose of the study was to gather information which could be taken as the basis for the selection of teacher training institutions that might be developed into regional science teaching centres.

Through questionnaires, checklists and observation visits of survey teams, the necessary information was gathered.

The number of institutions finally included in the study was trimmed from the 185 that answered the questionnaire to 57 recommended by the Steering Committee. Factors relating to geographical location, ease of communication, and potentialities for development and adminsitration were considered. Of fifty seven, twenty two were finally selected for visits of survey teams.

The twenty two institutions showed limited enrollment in sciences and mathematics, especially the latter. More schools offered majors in biology, general science and mathematics than physics and chemistry. The number of science subjects offered ranged from 10 to 39 and from 10 to 14 in mathematics.

The survey teams also attempted to evaluate the institutions in terms of potentialities for leadership in teacher-education, attitudes and ideas of staff on their role in science education, their conception of science education and the extent to which the school structure could lend itself to effective implementation of teacher-education programs.

The limited faculty in science and mathematics and the meager enrollment in these areas in teacher-education institutions surveyed is quite disturbing especially if considered in the light of the curriculum projects in these subjects. In spite of the numerous materials available to teachers, the teacher-education programs seemed not to accommodate them for the training of prospective teachers.

Based on projections of teachers needed in science and mathematics in the future years, the situation seems critical.

This study was mentioned because it reflected an urgent need of the country to look more carefully into its teacher-education program.

In 1969, three units of the U.P. – Science Education Center, College of Arts and Sciences and the College of Education initiated a program on the graduate level for teacher educators from the 10 teacher training institutions recommended by the survey. It is encouraging to note that in addition to the present sponsors of the program, NSDB, UNICEF and Department of Education, other international and private foundations have shown interest in the project. The participants are enrolled at the University of the Philippines for three semesters and a summer to earn a Master of Arts in Teaching degree, a program with about 50 per cent of the total units taken in the subject area. The participants are provided with actual experience in the use of recently developed curriculum materials in their field. Each participating institution at the end of the three-year program would have a corps of trained science educators who would then be in a position to disseminate the results of their training to other science and mathematics teachers in their region.

Perhaps the most significant study in teacher education in the Philippines is the one currently being undertaken by the Presidential Commission to Survey Philippine Education. The President of the Republic of the Philippines gives the following as the objectives of the survey:

1) analysis of the performance of our educational system and its relevance to development goals,
2) formulation of specific ways of improving the system by emphasis on the development of policies and mechanisms for chanelling resources, and
3) identification of critical areas requiring more detailed research and study.[5]

Teacher education is one of eight areas of the comprehensive study. The problems of teacher education are being studied in the light of:

a) teacher supply and demand,
b) quality of student recruits in teacher education programs,
c) quality of the faculty of teacher training institutions,
d) quality of teacher education curriculum, and
e) quality of inservice education programs.

The teacher education curriculum shall be evaluated using the following criteria:

1) extent to which objectives of teacher education in selected teacher training institutions parallel the objectives of higher education and teacher education as formulated by the Board of National Education.
2) extent to which the relative distribution of courses in general education, field of specialization and professional education conform to the suggested distribution of teacher education courses in the programs recently formulated by the Board of National Education,
3) extent to which courses in teacher education programs are designed to equip prospective teachers with the skills and attitudes of inquiry.
4) extent to which the general education component and the field of specialization component compare favourably with similar components in other degree programs in terms of unit requirements,
5) extent to which courses in general education and in the area of concentration are designed to meet the needs of student teachers in professional education course and
6) extent to which courses reflect current trends in elementary and secondary school curricula.

As envisioned, this survey hopes to suggest areas for depth studies.

A doctoral study which hopes to be a preliminary step in the formulation of a viable theory and program of teacher education in the Philippines is now being undertaken by Priscila Manalang.[6] This study aims to describe and analyze a Philippine rural school in order to infer its cultural dimension: the meanings, cognitive orientation, and values attached to the school by the teacher, school administrator, pupil, parent, community leader and other members of the community. The school is approached as a social institution functioning as a part of the wider social system in the community. The meaning of the school for the teacher will be carefully examined on a more limited focus.

For purposes of this paper, it is worthwhile to mention the status of accreditation of teacher education in the country. While nothing much has been done in this area, the only accrediting association in the Philippines will soon be sponsoring a conference for administrators of teacher education institutions, both public and private. The conference shall explore teacher education accreditation – how it should develop and the direction it should take.

The Philippine Accrediting Association of Schools, Colleges and Universities was established in 1957 with eleven charter members.[7] As of April 1970, 28 institutions had been accredited – 17 at college level and 11 at secondary level. Liberal Arts, Commerce and Education are the only institutional programs accredited at college level.

D. Some Possible Guidelines for Curriculum Evaluation in Teacher Education

In the light of conditions obtaining in Philippines education today, the following guidelines may be proposed for consideration in evaluating teacher education programs:

1. Relevance

Education to be valid and effective must be related to life and its realities. It must reflect a people's ideals and higher aspirations.

The term *relevance* is used here to refer to two things, relevance to needs and changes in society, and relevance to what actually happens and takes place in the classroom. It has been stated that students today. clamor for changes in the curriculum to make it more relevant to changes in society. Among the important changes in the social scene with implications for teacher education are excessive population growth, increased life expectancy, complexity of human organization, increasing influence of mass media, technological innovations, rising expectancies among the underpriviledge group. What actually takes place and happens in the classroom is something that our present teacher-education programs have not done much about. With extensive research in the area being done at present, the extent to which teacher-education has utilized results of such research is still debatable. Results of research in lesson analysis, teacher competencies, observation procedures, classroom communication, and teacher behavior should find their way in our teacher-education programs.

2. Orientation to special goals of country and of education and the teacher-education programs.

As mentioned earlier, national development constitutes the basic goal of the Philippines today. How much and how can teacher education contribute to the attainment of this goal? What types of teacher and what kind of training would make maximum contribution to national development? What type of program is necessary to achieve the goals of education and teacher education as defined by the National Board of Education?

3. Orientation to socio-economic and cultural background.

Teacher-education programs should be compatible with the cultural background of the country. They must be deeply rooted in the values, ethical beliefs, commitments, customs, mores, and concepts of the good life of the people in a given society.

Philippine education has often been criticized for its colonial orientation. In teacher education it has often been said and observed that we utilized researches performed on American children and in American schools on Filipino children. Of late, however, we observe a growing interest on the part of our educators and some educational agencies to conduct studies on Filipino children. A legislative act established the National Coordinating Council for the Study and Development of Filipino Children and Youth. This government agency undertakes and coordinates research on Filipino children and disseminates results of its studies to schools and other institutions. Do our present teacher-education programs provide our prospective teachers with an understanding of our local culture, conditions obtaining in our schools and problems they might anticipate as a result of the interaction fo socio-economic factors? Which variables influence the Filipino child's way of thinking and the development of his skills and attitudes? How does he behave in school? At home? While there is still a dearth of information in these areas, it is encouraging to note that government and private agencies are taking more interest in this field.

4. Impact of curriculum projects.

Curriculum materials reflecting modern trends and approaches and updated content must find their way in our teacher-education programs. In our country, several agencies as the Science Education Center and Health Education Center of the University of the Philippines, Bureau of Public Schools, and Bureau of Private Schools are actively involved in developing materials in the different subejcts for the elementary and secondary schools. Some projects are adaptations of curriculum projects abroad. Have our teacher-education programs accommodated these curriculum materials? If teachers are to develop the skills which these new materials stress, then their pre-service education must acquaint them with the objective and use of these materials.

Three phases of the teacher-education program might be looked into as far as this guideline is concerned:

(a) courses taken in the field of specialization,

(b) methods courses,

(c) student teaching.

Courses in the field of specialization should be chosen on the basis of thier relevance to the elementary or secondary school curriculum. A thorough study of aspects of subjects included in the elementary and secondary curriculum would develop the prosepctive teacher's subject matter competency. This would mean involving the faculty of other disciplines in the development of teacher-education programs.

The methods course should provide for preparation in instructional procedures especially appropriate to the subject to be taught using recently developed curriculum materials. An understanding of the rationale of these new materials, their structure and organisation must be adequately provided for in the course. Observation of the actual use of these materials by experienced teachers should be one of the suggested activities of the course.

Student teaching experiences must include provision for actual use of materials by the prospective teachers, Use of new evaluation procedures suggested by these new materials must also be provided for.

5. Desirable experiences in student teaching.

There seems to be no disagreement on the important place occupied by student teaching in teacher-education program. Practices, however, vary with regards to practices in supervision, length of internship, and requirements. In the Philippines, this is done both in the laboratory school and in a cooperating school. There is increasing use of public schools for internship purposes. The laboratory school is still an important unit in every teacher training institution in the Philippines.

If we recognize the uniqueness and individuality of each individual student teacher, greater flexibility in student teaching programs must be a guiding principle. Opportunities in and outside the classroom to deepen insights and gain understanding of the nature of the learner are requisites. To what extent do teacher-education programs provide exposure to and experience in the multiple facets of the teacher's job? Do student teachers get to know the total school situation? The development of the community school concept and the increasing use of the school as an instrument for community improvement has required a new outlook in teacher education.[8]

The influence of the supervising teacher/cooperating teacher on his student teacher has been the subject of several studies. Such studies have shown that prospective tteachers are greatly influenced by their supervising teacher/cooperating teachers in their methods of teaching and relations with students. Do our teacher-education programs have any provision for proper selection, recruitment and training of supervising and cooperating teachers?

6. Evidences of cooperative efforts in developing teacher-education program.

What resources and talents are utilized by teacher training institutions in developing and enriching their program? Do the teacher educators keep themselves abreast of developments in their fields? Do they demonstrate the values which they want prospective teachers to possess?

Do the institutions provide a suitable atmosphere which would be conducive to the personal development of each prospective teacher? To what extent is there a sharing of ideas and researches amongst teacher education institutions with an end in view of strengthening their programs?

The Philippines produces thousands of teachers every year but what it needs are good teachers. There is an urgent need for organized efforts on the evaluation of existing programs in teacher education. A closer collaboration amongst teacher education institutions to improve the quality of teaching should be planned. A sharing of their common problems and a more organized research-oriented approach to them may be more fruitful of positive results. This consortium of ideas based on research and study should be extended to other countries.

This is the rationale of this conference – to share our experiences on evaluation of teacher education programs in our respective countries. Although we realize the importance of evaluation, little has been done about it in teacher education.

In our effort to evolve a model for the evaluation of curricula for teacher education, we should always bear in mind that our ultimate goal is the advancement of not only teaching but also learning. Our task is not to teach our students how to teach but to help them become teachers. Becoming is a process of growth on self-building. It takes place primarily through the efforts of the learner; thus it is an active process. It cannot be "given" by one person to another; it is not a set of procedures to be carried out or a product to be achieved. It is a dynamic process of development in which the student accepts or rejects new information, new attitudes and new practices as he prepares himself for his role as a teacher. As teacher educators, we still have a vital role in assisitng the student teacher to become a good leader. However, in the performance of this role, the capacity of the individual for self-direction or his free will should be enhanced. This may be developed through a teacher education program which receives its impetus and insights from the living realities and demands of society.

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OBJECTIVES IN TEACHER EDUCATION: A PRE-EVALUATION TASK

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In regard to the general topic of this conference – 'Curriculum Evaluation in Teacher Education in South-East Asia' – it is pertinent to note that evaluation is one task in a series, and presupposes the existence of aims or objectives which serve as sources of criteria against which to evaluate.[1] In fact, without aims or objectives stated in some explicit form, evaluation is a process of doubtful legitimacy and questionable usefulness. Partly for that reason, and partly because I have been concerned with identifying objectives in the social science area at both the secondary and teacher education levels, the task undertaken in this paper is to indicate a basis on which some specific and possibly measurable objectives in teacher education can be formulated.

In turning to consider objectives in one aspect of teacher education we need to recognize that a thorough consideration of this question involves consideration of other questions relating to objectives in education generally, the role of the teacher in the educational process, and the function of training institutions in the preparation of teachers. I propose to pass over a detailed discussion of those issues by making three assumptions which enable us to move to the points which I want to discuss. If you find these assumptions unacceptable, or unsatisfactory to some extent, we can, perhaps, return to consider them at a later time.

The three assumptions are:

- Education is in part a social process and, at the same time, an integral part of the larger society in which it occurs.
- An understanding of social aspects of education contributes positively to effective teaching and other associated responsibilities.
- Understanding of social aspects of education is achieved most effectively through the conceptual frameworks and inquiry strategies of the several social science disciplines.

Although these assumptions are very important in relation to the discussion that follows, it is possible only to illustrate them here and leave members to appraise their acceptability independently.

The first assumption has a hallowed character, being an observation made by a sociology father in Durkheim.[2] It scarely needs documentation these days in the light of research that has been done on the social dynamics of the classroom, the school as a social system, and relations between socio-cultural background of children (and teachers) and performance in school. Testimony to the recognized importance of this characteristic of education is given by the presence of courses in the social foundation of education, sociology of education or comparative education in teacher education programs around the world.

What is not so widely recognized, and a point I wish to stress, is that the social character of education and its relations with the larger society in which an education system functions are far more complex than is apparent from the topics and courses cited above. Comparably important, but less widely recognized and correspondingly neglected on many occasions, are cultural, political and economic dimensions of education. This point can be readily illustrated.

Education involves, among other things, the transmission of values, attitudes, beliefs, perspectives and other elements of a culture, and the school is an agency of major importance in the transmission of the culture of a society. Furthermore, selections of curriculum content, with implied values and assumptions, often reflect the dominance of particular sectors of a society – a colonial power, an urban as against a rural sector, or socio-economic, religious or ethnic groups. In those circumstances the educational system can function with different relevance for members of particular groups, influencing their prospects of developing as people or for participating in the life of the society. Even in more homogeneous societies, characterized by relatively uncomplicated forms of change, the school can be a setting for clashes in values and function to transmit several sets of values and discontinuities between values, as Spindler and other anthropologists have noted.[3]

Education also involves decision-making and, certainly at the level of policy making, educational decisions and practices often flow directly from political policies. Decisions of national, state or provincial governments on desegration, aid for private schools or equalization programs are examples of political decisions which bear upon the management and functioning of schools and educational systems, and even upon the performance of teaching tasks. Less apparent but no less significant for the operation of schools are conditions or requirements pertaining to curriculum content, the training of teachers and the formal status and role responsibilities of teachers. In several Australian state systems of education, for example, governmental regulations set out responsibilities of the teacher in relation to the teaching of religious and political issues in the school.

The third dimension of education to which I wish to refer is economic and involves relations between the economy and the education system, schools and teachers. A most obvious relationship stems from the wealth or poverty of a society and the amount of resources that can be allocated to the education system.[4] But again there are more subtle relationships between the economy and education in the form of economic values and perceptions of the relevance of education to society and the individual, giving rise to beliefs about the relevance of education to employment or the economic value of education.

The examples cited relate in the main in consequences for education that derive from the functioning of the cultural system, the economy and the political system. It is important to recognize, however, that the influence is not a one way relationship and that the functioning of the education system has important consequences for the functioning of society – its economy, political system, religion and social and cultural continuity and change. Aspects of those consequences have been discussed in the literature in terms of political socialization, the role of the school in religious education and human resource development.[5] From the discussions it is clear that education is both acted upon and acts upon society and its sub-systems, and that anyone aspiring to understand education or to work effectively as an educator must take account of both directions of influence if he is to be comprehensively informed.

In reaching that observation, we have arrived at the second assumption – that knowledge and understanding is a necessary (although not necessarily a sufficient) condition for effective performance in education. Almost certainly, knowledge and understanding of particular matters would be differentially relevant to people in different positions in educational systems, and again to people in educational systems in different societies. The teacher uses psychological, sociological and, in some societies more than others, anthropological insights and understanding. Both as a teacher and in his capacity as a citizen or member of a professional association, concerned to improve the quality of the functioning of the educational system, the teacher may also make considerable use of economic and political insights and understandings.

The relevance of each type of insight and understanding is different for administrators in different systems and societies. Administrators must know something of the child, the learning process, teachers and their associations, the community, organizational theory, finance, and the functioning of the economy and the political system. In some societies more than others, it is important to know distinctive values, beliefs and customs of different social and ethnic groups in a society.

In brief, there can be no argument about the importance of socio-cultural, economic and political insights and understandings to educators and it should be sufficient on this occasion simply to indicate what is meant by the second assumption and then to move on to consider the third – that an understanding of social aspects of education is achieved most effectively through the conceptual perspectives and inquiry strategies of the several social science disciplines.

This assumption is not likely to be so readily accepted as the previous ones and certainly cannot be so readily demonstrated. In order to indicate the importance of a discipline approach I propose to discuss disciplines, drawing on work undertaken in curriculum development projects in the social science area.[6] Again, in order to move through a complex area fairly quickly, I propose to offer two generalizations as assumptions which can be more closely examined on other occasions, but which serve as the basis for this discussion.

The first assumption is that education, whether for pupils in schools or teachers in training, is concerned with the development of students as individuals and, in the latter case, in relation to responsibilities they will assume as teachers. Further, such development can be specified in more precise terms as Bloom and his colleagues have indicated.[7] They have analyzed behaviour into cognitive, affective and psycho-motor aspects and specified the first two in more detail – cognitive behaviour in terms of knowledge, comprehension, application, analysis, synthesis, and evaluation and affective behaviour in terms of receiving, responding, valuing, organizing and characterization of a value or value complex.

The psycho-motor area has been neglected but conceivably it could also be further analyzed.

While such a taxonomy is useful in directing attention to particular aspects of behaviour, it is incomplete in that it does not indicate specific areas of knowledge or abilities which might be developed. They have to be specified independently of the Bloom taxonomy.

This observation brings us to the second point: that areas of knowledge, sets of skills and affective attributes may be identified from the various disciplines – a position or interpretation that may be more readily understood following a brief discussion of the several social science disciplines. In particular it is useful to identify their major characteristics[8] as follows:

- A particular point of focus or area of interest such as social structure and interaction, culture, the economy, the political system, the human/social past, man's physical environment and relations between particular areas of phenomena or sets of phenomena. Social science may be identified as focussed on the totality of these areas or on what might be identified briefly as the social domain.
- An orientation and commitment to making sustainable inferences, generalizations, or conclusions about the area of interest. In this context freedom to discuss and to inquire and objectivity are necessary conditions for achieving desired ends.
- Sets of concepts, conceptual models and conceptualizing processes for facilitating precise discussion of phenomena and processes of interest, and undertaking a rigorous examination of their characteristics and behaviour.
- Sets of techniques and strategies of inquiry for observing phenomena and events, recording, analyzing and interpreting information, and communicating outcomes of the inquiry process.
- Content in the form of findings, conclusions, theories, hypotheses and other types of theoretical formulations. This part of a discipline is often referred to as a body of knowledge. It is important to recognize that this 'body of knowledge' is arrived at by means of sophisticated techniques and processes, and can only be accepted on the basis of assumptions about definitions, techniques and other elements of the inquiry process. Largely for that reason, the

> inclusion of this element of a discipline or set of disciplines in an educational program is a questionable practice, particularly if done without reference to means by which the findings have been arrived at.

From this perspective, the social science disciplines constitute systems of inquiry focussing upon particular aspects of man and his social environment and serve to facilitate learning by direct study and from the experiences of one's self and of others, and as aids in the process of arriving at valid and reliable interpretations or in assessing the validity and reliability of the interpretations of others.

It is on that basis, that the assumption or generalization concerning the usefulness of the social science disciplines to educators is offered. Given that assumption, certain educational objectives can be indicated and expressed in terms that permit the development, teaching and evaluation of programs with some degree of preciseness.

A task that now confronts us is to indicate elements of the social sciences that are particularly relevant to a program for educators, and to state those elements in terms that are amenable to teaching and evaluation. I propose to do so by nominating and discussing two concepts and some points of techniques as organizing ideas in the understanding and practice of education.

One concept I would suggest is *socialization.* It is a difficult concept to define because socialization is used to refer to different things by different types of specialists. Among psychologists socialization commonly is used to mean social learning and to refer to learning to express aggression or to perform toilet operations in socially acceptable ways. Among sociologists socialization is commonly used to mean learning knowledge and skills relevant to occupying a particular position and to being a member of the associated group. Among anthropologists socialization is used to refer to the learning of values, beliefs, customs and other elements of the culture of a society.

One further point concerning the usefulness of socialization derives from the fact that a considerable amount of research has been undertaken into factors seen to operate upon the socialization process. Socialization can, be regarded as the dependent variable and factors such as ethnic, religious and social background, or the family, peer group and other socializing agencies studied for their influence upon the socialization process.

When account is taken of work that has been done on those factors, on the functioning of socializing agencies, including the school, on the socialization process in itself, and on the consequences of that process, it is evident that socialization is a concept to which a considerable amount of research and theory relevant to education is related, and an understanding of which is basic to performance in education.

A second concept I would suggest is *social system.* It, too, is a concept with a diversity of usages: it has been used to refer to such diverse units as a two person group and a large complex society. The usefulness of social system as a concept is in directing attention to certain common features of those diverse entities – membership, boundary, shared values, beliefs, definitions and other elements of a culture, and functioning generally to constrain the individual to some degree in order to maintain the continuity and perhaps development of the group, uisng socialization along with other means. Particular social groups such as the family, the school, the community, religious, ethnic and, possibly, socio-economic groups, the tribe, the corporation and other forms of formally organized social units can be considered in relation to the educative process. In understanding social systems one gains some understanding of the social environments in which man lives and works, and the problems of living and working in a diversity of social environments. Social systems are also the units by means of which a society functions – where decisions are made, goals selected, resources allocated, coordination effected and performance achieved.

Social system can also be regarded as the dependent variable or, in systems analysis terms, the receiver of inputs. This conceptualization directs attention to variables that act upon social systems – in this case to demographic, economic, religious, political, and other factors in the environment of schools and educational systems. In being a concept to which much in education can be related, social system stands as a second major concept relevant to the understanding of education and to effective educational performance.

It is now time to recall that the focal points of interest and concepts such as socialization and social system are only part of the contributions of disciplines. In addition, and understanding of research techniques and inquiry strategies is necessary if the usefulness and limitations of concepts and theories are to be grasped. What is 'known' in soical science, as in other disciplines, is known on the basis of the research techniques and inquiry strategies employed in particular studies. Because social situations are so complex, research procedures available are so far from adequate in many cases, and because of the human fallibility of many research workers, findings from research must be accepted tentatively and with an awareness of the qualifications to be made or conditions under which findings, generalizations or inferences can be held. For those reasons, a grounding in research techniques and inquiry strategies is an important part of the training of educators who use the results of research.

One particular element of the research approach, namely a concern to make sustainable statements about the area of interset warrants a special comment. That concern is basic to the development of rigorously defined concepts, careful hypothesizing and selection and use of techniques for gathering, analyzing and interpreting data. Social science disciplines, as others, require an attitudinal commitment that is apparent in the effort made to produce sustainable statements and, incidentally, to exemplify academic values in free discussion and inquiry, and objectivity.

Finally it is important in the training of educators to go beyond theory and hypothesizing to policy making and planning – the selection of goals and the formulation of courses of action to achieve those goals. I would hasten to add that policy making involves more than the social sciences contribute. Nevertheless their contributions are important ones in relation to establishing the tenability of fact assumptions on which policies are based in part. Accordingly, the nature and limitations of social science contributions need to be known if planning and implementation are to be undertaken on an empirically sound basis.

The point of this analysis is to draw attention to certain elements of disciplines which relate to aspects of cognitive, affective and psycho-motor behaviour (to follow Bloom) where development can be specified in respect of student teachers. At least certain abilities and skills, as with statistical and other forms of inquiry, analysis and inference techniques, and means of reporting and communicating information, findings or recommendations, can be specified in terms which permit teaching to develop knowledge and understanding, skills and abilities in asking and responding to questions, and evaluation of progress to be made. Specifications can also be made of concepts and theories and in terms which offer a starting point and an order of progress, and a basis for assessing the development of students.

Thus, we have a rationale from which to develop educational programs that can be assessed for their usefulness in achieving increased skills and abilities in specific areas, That is, the effectiveness of at least certain aspects of teacher education programs could be assessed in terms of their impact upon students. This situation should appeal to the curriculum evaluator, particularly when it is anticipated that he would be a member of or consultant to any group undertaking development of statements of objectives and programs to be taught in relation to those objectives.

In considering evaluation account must be taken of the fact that evaluation at the end of a training program is but one occasion when it can be undertaken. If an important objective in teacher education is to prepare people who will be effective in their work, then a thorough-going and comprehensive evaluation of a teacher's preparation should take account of his performance after some time has been spent 'on the job'. Although factors such as subsequent experience intervene to create difficulties in assessing the relevance of the pre-employment programs, techniques such as matching samples from different training institutions permit some of these technical problems to be handled. In any case, the task should be tackled rather than put to one side in the 'too hard' category.

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RELEVANCE OF PIAGETIAN THEORY TO THE EVALUATION OF TEACHER EDUCATION CURRICULA

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EDITORIAL NOTE:

> Since the above paper was unavailable, only a report of the speech delivered by Dr. Anastasiou, who will be referred to as "CA", will be given in what follows. Should there be gross errors in reporting, we tender our apologies.

CA remarked at the outset that one of the problems with discussion on Piaget is that in the first place his name itself suggests controversy. As a man who has been, and is still, talking about his many ideas for over 50 years and expressing them in so many words, his theory has been interpreted by so many people that practically nobody understands what he really means in terms of his theory except Piaget himself. CA pointed out from personal experience that even when one spends eleven months with Piaget, things change gradually from week to week so that towards the end one tends to become quite confused.

CA however struck a reassuring note when he pointed out that there was one thing which has not changed with Piaget, namely his clinical method of ascertaining children's thinking by talking to them and allowing them freedom to answer in their own way. And this approach is what, in CA's view,endears him to the classroom practitioner. Piaget has of course been severely criticised by theorists and research specialists for his lack of well-thought out and carefully controlled investigations. Skeptics have wondered how he was able to learn anything at all about children, and to be sure of his findings with the methodology he employs. And yet, according to CA, Piaget is capable of saying confidently to anyone something like this: "Look, if you can go out into this particular school in Geneva and if you take a seven-year old child from that school and present him with this particular apparatus this is what that child's response is going to be to a particular question," even though he has never seen the child. In fact, CA doubted if Piaget has actually visited a school to talk to children during the last fifteen years, and yet his prediction of the precise behaviour of children in response to various Piagetian tasks is generally accurate.

One peculiar characteristic of Piaget, according to CA, is his insistence on writing in French, as is typical of Genevan French people, even though CA rather suspects that he probably writes in English and translates into French. The problem lies in the fact that there are many French words which have no English words and things are expressed in the longest possible way. CA however quipped that this ambiquity might be what great people thrive on, for if one can find a way of pleasing himself while one's critic can also find a way that pleases him, then what he writes would work out beautifully.

Returning to the main topic of the paper, CA doubted if much of Piaget's findings could be effectively applied in the secondary school classrooms, and hence he would be confining his remarks to the primary school level. Since many who have heard of Piaget do not really understand the structure that he describes for the development of children's logical thinking, CA thought that it would be appropriate for him to review Piaget's concept of stages. Wroking with his own children, Piaget found that he was able to identify qualitative stages of development. For instance, he found that the infant did not seem to have established the permanence of objects, for as long as the mother was present she existed but once she was out of sight she was also out of the infant's mind so to speak. This first *sensori-motor stage*, as CA explained, is a non-verbal one, but the infant possesses some thought structures which are expressed through certain reflex actions. The thought structures are what Piaget calls "Schemes" which he insists is different from the English rendering as "schemas". CA went on to say that these "schemes" are based on action, and the first action is one of grasping anything which touches the child's hand. New "schemes" are developed through modification of old ones and soon the child develops the concept of the permanence of objects, then of certain primitive concepts of space, time and causality, and eventually develops verbal thinking.

CA then indicated that at the end of two years the child begins to think in terms of signs and symbols, for he has developed images of things in his mind through verbal expresssion. At this *stage of pre-conceptual thought,* the child is involved in imitating the sounds and actions be perceives, whether they be from his mother, his father or the pussy cat. CA further explained that the child who sees different beetles at different places in the garden would typically think that it is the same beetle, for he does not think in terms of a large class of beetles. On the other hand, if he has a group of objects in front of him, he would think that the group changes when the objects are merely rearranged. As a further illustration, CA pointed out that a child who is being driven round from one side to another side of a mountain would similarly think in terms of a new mountain. CA stressed that in spite of these difficulties, the child is developing a very strong basis of symbolic thought, which is expressed in language.

When the child is able to form a consistent class at about age four, the child moves into what is called the *stage of intuitive thought.* Unlike the child at the stage of preconceptual thought who tends to adhere to his first decision, the child at the stage of intuitive thought changes his opinion because he centers on different aspects of the same problem. CA illustrated this by referring to the conservation task. Thus when an interviewer changes a ball of plasticene into a sausage-like shape, the child tends to say that there is more plasticene in the sausage than in the ball. Then when the interviewer continues to make the sausage longer until it is as thin as a pencil, the child suddenly changes his mind and says that there is less plasticene in the elongated object because it is too thin. CA further explained that the child is incapable of focussing on two dimensions at a time, nor is he able to consider more than one quality of objects For example, when questioned as to whether there are more boys or children in a class of 25 boys and 5 girls, the child tends to say more boys, forgetting that boys are included in the class of children and focussing instead on the proportion of boys as compared with girls.

CA went on to explain that the child reaches the *stage of concreate operational thought* when he starts to be able to focus on two factors at the same time, when he starts to be able to reverse processes in his own mind. CA however hastened to say that this does not always occur in all children at precisely the same time nor to children from different cultures, although there is a fairly consistent pattern within the same culture. The child can only deal with those ideas he can visualise or manipulate, but he is unable to consider more than one variable at a time nor to construct a hypothesis. CA pointed out that even though the primary science curricula are based on experimentation, the child at the concrete operational stage is still unable to carry out a real experiment effectively. CA remarked that this was not a criticism of the science curricula, but he felt that it was important for us to adjust our expectations. It is only at the *stage of formal operational thought* that the child, now an adolescent or an adult, is able to deal with hypotheses, to analyse variables, and to make logical comparisons without reference to concrete representation.

In terms of its educational relevance, CA felt that the stages per se are not very useful, but the way in which they are determined by talking to children with the use of materials has useful implications. CA therefore insisted that in evaluating the curriculum, it is important to get the child's view of what is happening and not to reject children's responses which do not result in desired end-product behaviours, but rather to make adjustments and try again. How often, CA asked, do we actually sit down with the child on a one-to-one basis and follow through discussion the child's logic for the conclusions he reaches about the materials and the problems presented? Fortunately, as CA observed, many new curricula in the USA, Canada, Great Britain and elsewhere are beginning to realise the importance of this approach and adopting it whenever feasible. CA suggested that instead of giving a test and seeing what the child writes down, the Piagetian procedure adocates allowing the child to go in the direction that he wants to go, thereby getting a much broader picture of the child's thinking. According to CA, when we sit down with a child with a lot of preconceived ideas, the child is also trying to size up the interviewer, looking for clues or cues as to what answer he wants.

CA intimated that every teacher is actually a curriculum developer and a curriculum manipulator and he should function on the basis of the needs of children, as can only be ascertained by sitting down and working with individual children. He therefore recommended strongly that teacher trainees should have ample opportunities to experience working with children on a one-to-one basis, even though they must do so within the realistic context of a class size of 40 or so children.

CA then recountered an experience he had with a primary infant class in Britain. The teacher was teaching units of measuring volume in a relatively structured way. She filled up a pint bottle with water and poured into a quart bottle and repeated this process. Then she asked the children how many pints are there in a quart and was self-satisfied with the expected response of pupils thinking that her pupils knew all about volumes. CA however sat down with some children and using a thin pint bottle which was as tall as the quart bottle, he filled both of them up with water and asked which had more water. The children now responded that they contained the same amounts. Astonished, the teacher then tried to teach the children by means of little centimetre square blocks. She piled a tall thin column of blocks beside a thick column just as tall but with twice as many blocks. Then she made them count and asked the question of whether the pint or the quart bottles, which resembled the respective columns of blocks, contained the same amount of water. This time the children admitted that the quart bottle had twice as much water. But when CA posed the question differently, for example, in terms of pouring apple juice into both bottles and asking the children which they would rather have if they were really thirsty, the children tended to say that it made no difference which bottle they had, CA indicated that this example was merely to show that the only way to be convinced as to what children can or cannot do is to sit down and talk to them and that in order to be sure what a given curriculum is doing is to find out how the child is analysing with his little computer that particular curriculum.

As another illustration, CA recalled that in Geneva he had different groups of six chairs each shown to Standard I children and asked them what was common among the groups of desks. They all replied that they all had six desks. Then he spread out a group of desks and the children now thought that this group of desks had more desks than other groups of desks which were not spread out. When they were asked to count they admitted that the spread out group had six desks but insisted that it still had more desks than the others. In other words the children had not attained the concept of the conservation of number.

Taking older children say in Standard V, CA pointed out that in the case of the simple pendulum, children, like Aristotle, tend to think that the greater the speed of a pendulum the shorter time it takes to execute each swing, even though the pendulum bob has to cover a longer distance. CA emphasised that rather than thinking that children are stupid, one has to change one's expectation of what children are capable of thinking at different stages of development. And one is able to change one's expectations only by talking to and working with children individually. It is through questioning of children, who are confronted with materials which they are allowed to manipulate without any direct help that the Genevan school has been able to engage in "apprentisage" or learning, thereby getting children to proceed from one stage or sub-stage to another. Although the Genevan school would not regard this as teaching, CA felt that it was the best form of teaching which should be recommended to teachers and teacher educators.

CA then elaborated on the four factors which Piaget considered essential in propelling a child from one stage of development to another. Maturation is one of them and Piaget maintains that maturation of the nerve cells alone is necessary but not sufficient. Although Piaget is generally pessimistic about acceleration of cognitive development, CA felt that Piaget seems to be changing his view a little as a result of recent Genevan studies on learning.

According to CA, Piaget would similarly admit that physical experience is very crucial, but he would insist that the child be allowed to work out his own structure. CA pointed out that those who are anti-structure might think that Piaget is on their side, whereas in fact Piaget does envisage an extremely complex structure for learning to take place. Structure would not be in terms of the way we talk to children, but rather the way in which we structure the environment for the child and the way in which we change the materials in the environment. In a deprived environment there can be a lag in cognitive development of as much as six years and CA suggested that it would be interesting to find out if there is a lag between children from Kuala Lumpur and children from an isolated kampong, and if so by how many years. According to CA, there is documented evidence to suggest that even some university graduates have not been able to attain fully the stage of formal operations and have been able to get by because they have not been confronted with challenging problems.

The third factor is that of social experience, as brought about by education where the child interacts verbally with others. CA referred to the recent studies by Sinclair who found that in focussing on certain language sub-systems, such as are in terms of a series of sizes rather than absolute sizes, children are able to interpret various problems more quickly and hence are able to reach the next stage a little bit more quickly. However Sinclair and others have found that language and social interactions are not really necessary at all. CA also pointed out that the work of Hans Furth with deaf and dumb children who were isolated from people confirmed that many were able to reach even the stage of formal operations without language.

The fourth factor is that of equilibration which Piaget regards as the most important and according to CA, Piaget is currently writing a large volume on equilibration itself. Due to his earlier training as a biologist, Piaget compared the development of a child's intelligence to movement of snails from one state to another. The twin processes of assimilation, where the child changes the objects to conform to his mental ideas or "schemes," and accommodation, where the child changes his conception of the objective world to fit the objective world itself, can occur at the same time and Piaget says that the result of this is one of adaptation. According to CA, Piaget suggests that a child is likely to learn if a new situation is presented which conflicts with the operation of the existing "schemes". CA observed that there have been several primary and infant school programmes which deliberately attempt to develop conflicts where different children in the same class are encouraged to come up with different ideas and through social interaction, equilibraiton would take place.

CA however pointed out that Piaget does maintian that the child must have the basic structure or maturation and that one can only move from one step to the next. If the experience is too greatly divorced from the existing structure, the child simply does not adapt. CA explained that as a result the child simply rejects the idea totally or he forms a false accommodation that would inhibit later equilibration.

CA emphasised that one can only find relevance in Piaget's work by actually going out and talking to children, using if necessary different tests. Various people have attempted to replicate his studies and some have obtained slightly different results. The Genevan School itself has been investigating the effects of teaching one type of Piagetian task on another type of Piagetian task, such as the effect of being taught conservation of volume on the conservation of matter, weight, number, length, etc. CA concluded by saying that in order to evaluate the curriculum of teacher education one has to consider the extent to which trainees are encouraged to work with children to find out how they are thinking, or in other words to evaluate the child's curriculum.

CURRICULUM EVALUATION IN TEACHER EDUCATION IN SINGAPORE

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Introduction

1. Let me first give a very brief account of the aims of education and the education system in Singapore before I speak on teacher education and the evaluation of its curriculum in the Singapore context. I shall take this opportunity of thanking some of my colleagues in the College and the Inspectorate for their help in the preparation of this paper.

Aims

2. The main aim of education in Singapore is to develop to the fullest extent possible the potentialities of every child mentally, physically, morally and socially in accordance with the needs and interests of society and ensuring the optimum acquisition of experience, knowledge and skill, each according to his intelligence, ability, aptitude and interest. This entails the inculcation of sound habits, values and attitudes which would lead to the development of creativity, moral rectitude, social responsibility, a sense of service an mutual understanding within a multi-lingual, multi-racial and multi-religious society. This entails the instillation of the love of freedom, truth and justice with respect for fundamental human rights. It entails the transmission of knowledge and the development of skills suited to the needs of a rapidly industrializing and technological society. It entails the preparation for changes in society. It also entails the acceptance of the democratic way of life, the inculcation of love for Singapore and the fostering of a strong sense of national identity and loyalty.

3. Besides pointing towards the general aim of education, Singapore has, since she attained self government in 1959 and independence in 1965, set herself to achieve many specific objectives. First among these is national identity and loaylty. This is of paramount importance in a society with four official languages, many cultures, many religions and many races. With one quarter of the entire population in school, education plays a very important role in this task as it must serve at once as an instrument of bringing the pupils together through the school system and of retaining the cultural heritage of the three major races. In order to achieve this aim the following innovations, among others, have been tried out.

3.1 A policy of School integration has been implemented since 1960 with the main purpose of breaking down the language or communication barrier. A school is said to be integrated when pupils and staff of two or three different language streams of education work and learn in one school building, share all facilities and come under the supervision of one principal. For example, in an English-Malay integrated school, generally half the number of pupils receive their instruction in the English medium and the other half, in the Malay medium. They will all follow the same curriculum of study, take part in the same games together, share the same canteen and obey the same set of school rules and at times be taught by the same teachers. At present, 25% of our schools are integrated schools, each with one of the following language stream combinations: English-Chinese, English-Malay and English-Chinese-Malay. It has been found through a survey that social distance is shorter in integrated schools than in non-integrated schools. This is a positive step in bringing about greater understanding, better tolerance and more mixing and sharing among pupils whose media of instruction are different. The same can be said of the teachers.

3.2 A concerted effort to produce effectively bilingual school-leavers has been made for many years with a major aim of insuring better communication (and hence better understanding and acceptance) among future citizens of different racial origins – the reason being that in a compact multi-lingual society not everybody is expected to be quadrilingual and no one can remain monolingual. The study of a second language is made compulsory throughout all levels of education in schools. To further strengthen the learning and the use of a second language and to bring the staff and the pupils of different language streams closer, certain schools subjects are being taught in a second language.

3.3 In all extra-curricular activities, such as sports and games, music and dance and uniformed organizations, pupils are usually grouped or teamed up according to their interests and not on a racial or linguistic basis. On the parade ground and in the playfields orders and directions are given in Malay, the national language.

3.4 The teaching of civics, the weekly assembly at which the principal or a senior teacher exhorts the pupils and the daily flag raising and lowering ceremonies accompanied by the national anthem in schools are some means to help foster a sense of national identity and loyalty.

4. Another important specific aim is the provision of at least eight years of education for every child from the age of six without regard to race, language, religion, sex, wealth or status. The consequence of this aim is the building of both primary and secondary schools in sufficient number to cater for all school-going children in the four language streams (Malay, Chinese, Tamil, English), the large scale training of teachers to meet the rapid demand for school education and the provision of equal opportunity for tertiary education among all school leavers. Singapore has been able to achieve this specific aim after years of concerted and determined effort.

5. As Singapore is rapidly becoming industrialised, more conscious of technological developments and export-orientated, educational priorities have shifted from quantity to quality and from general to technical and vocational education. In order to attain the general aim of quality in education, the large scale re-education of teachers, the regular revision and up-dating of the school curricula, syllabuses and textbooks and the constant process of evaluation in education are some of the specific objectives. In order to strengthen technical and vocational education, novel curricular devices, new teacher training schemes and comparatively large financial and personnel provision are brought to bear. Here the school is considered a social institution responsible first for developing young people to fit into the existing society and secondly for developing young people who will seek to improve the society in which they will find themselves.

System

6. Children of Singapore citizens and those born in Singapore are entitled, from the age of six years of free primary education. Parents have complete freedom in putting their child in the school with the language medium of instruction of their choice. The maximum age in primary schools is 13+ and overaged pupils (that is, pupils who have been retained for one or two years) must pay a nominal fee. Every pupil is, however, charged a nominal fee of $3.00 per term for games, equipment and library books. At the end of six years of primary education, pupils sit for a public examination known as the Primary School Leaving Examination in one of the four official languages. Pupils on passing this examination (about 60%) are given places in secondary schools. Those, who have failed but are not over-age, repeat the course at the primary six level and those who are over-age go on to opportunity classes organised by the Adult Education Board.

7. At the secondary level, there are two years of lower secondary education with a common curriculum in which pupils learn both general and technical subjects. This is followed by a programme of diversified secondary education. Pupils who have the aptitude and the ability for academic work will continue to pursue their secondary education in academic, technical or commercial schools for another two years. At the end of this period, they sit for the School Leaving Certificate Examination in the subjects (usually between six and eight) and in the language of their choices. Those who have done well may continue their secondary education for two more years in pre-university classes. Some who have passed will seek employment and others who have failed but are not over-age (maximum age is 17+) may repeat the one year's course at the school certificate level.

8. Pupils who have the aptitude and the ability for technical subjects and crafts will normally continue their secondary education (after the first two years of lower secondary education) in vocational institutes for two more years or in industrial training centres for six to twelve months of craft or trade courses. Those who have done well at the end of their training in vocational institutes and are keen to pursue further may continue their technical or vocational education in the Polytechnic or the Technical Institute. However, most pupils seek employment on completion of their secondary education and training in vocational institutes and training centres.

9. The pre-university classes offer arts or science or commercial courses. At the close of a two-year pre-university course, pupils sit the Higher School Leaving Certificate Examination in the subjects (not more than four) and in the language of their choice. The examination and its results are generally used by our universities and colleges for the purpose of admission.

Teacher Education

10. Before the Second World War teacher training was carried out at different institutions for different categories of teachers. Teachers for English medium secondary schools were trained at the Raffles College, the predecessor of the present University of Singapore and the University of Malaya. It provided a four-year liberal arts or science course with education as an optional subject in the final year for those who intended to be teachers. This education course was very similar to the third year of the Normal Class training. The training of teachers for English primary schools was the responsibility of the Government Education Department which organized and conducted Normal Classes for student teachers. These student teachers were given a three-year part-time in-service normal training course in the afternoons while they worked in the mornings. The lecturers were mainly experienced teachers or school inspectors. This form of pre-service training has the advantages of:

10.1 immediately procuring the services of the teachers who have signed up as teachers and are undergoing training.

10.2 giving the teachers-in-training ample practical experience and providing the supervisors and principals adequate opportunities of guiding and helping them in the "tricks of the trade".

It has, however, the disadvantages of:

10.3 taxing tired teachers-in-training who are expected to do well both as school teachers and as trainees – a task may find difficulty in fulfilling.

10.4 limiting the training course to basic fundamentals aimed at producing "teaching mechanics" and not educators – no time is given for the trainee to ponder over what he has learnt.

On the other hand, Malay primary school teachers were trained at two residential colleges located in Malaya. Students for these colleges were admitted after they had completed a seven-year primary education. The majority of Chinese school teachers came from China. They were either untrained, not trained by the local education authorities. Likewise, Tamil primary school teachers who came from India were untrained.

11. After the war with its attendant political and socio-economic changes, the training of teachers to meet the great demand for education became the business of the Government. The Teachers' Training College (T.T.C.) and the University School of Education (U.S.E.) were established one after the other in the year 1950. For ten years the T.T.C. conducted full-time pre-service teacher training known as the Certificate Course while it continued to run the part-time in-service Normal Course. It was during these formative and momentous years that the T.T.C. expanded both in enrolment and in scope of training. By 1959 the T.T.C. was providing both in-service and pre-service training for teachers of all four streams of education in Singapore. With the achievement of self-government in 1959, Singapore launched the ambitious programme of providing universal primary education and was faced with the acute shortage of teachers. This resulted in the suspension of the two-year full-time pre-service training course and the great expansion of the three-year part-time in-service training course. Simultaneous with the increasing demand for primary school teachers was the increasing demand for secondary school teachers, so the T.T.C. also under took the training of secondary school teachers. Side by side with the one-year full-time pre-service diploma course run by the U.S.E. for graduates, the part-time in-service training of graduate teachers for both the Chinese and the English media began in the T.T.C. in 1960. By 1965 when Singapore achieved independence the enrolment in the T.T.C. had trebled and its training duties included part-time in-services courses for teachers of lower secondary, technical, home economics and music classes in schools.

12. When the teacher supply and demand situation in schools eased somewhat about five years ago a return to the two-year full-time pre-service training was made, while most of the training was still of an in-service nature. The gradual switch from part-time training to full-time training was made over the past five years so that from this year, with the exception of the last remaining part-time classes and a few special courses, all trainig is full-time. In other words, Singapore has come to the close of an important chapter in her history of teacher education whereby the part-time in-service teacher training as a means of pre-service teacher training will be a pattern of the past by the next College year.

13. The training of graduate teachers is now jointly conducted by the T.T.C. and the U.S.E. at the T.T.C. The training course may be part-time or full-time depending on whether the student is currently teaching or not teachign. Because of the exigencies of the service this pattern of graduate teacher training will continue for some time to come. Owing to the need for practical knowledge and skill in the training of craft and technical teachers, who will have to work in factories, shipyards etc. a pattern of in-service training must necessarily continue. Though there will no longer be in-service initial training of teachers, the re-training and further training of teachers in service have been correspondingly increased since 1963. As a result of the swingtowards technical education some re-training courses were organised for general education teachers to enable them to teach technical subjects. However, the majority of in-service courses are of a refresher nature aimed at the imporvement of the quality of education. By this we mean having teachers who are more dedicated, who are better trained and who keep abreast of the latest advancements in education.

Evaluation

14. Since the T.T.C. is the sole institution of teacher training in Singapore and since it is also an integral part of the Ministry of Education, what happens in schools has a profound and direct effect on it. A machinery of evaluation has been established in the administration of education for the systematic and continuous process of fact finding and data gathering in order to aid decision making with respect to policy and its implementation. The Advisory Committes on Curriculum Development composed of professional officers (the director of research, heads of professional divisions,

some T.T.C. members, school principals and teachers) is a body actively engaged in guiding the development of school curricula. It has some 17 subject standing committees each of which is charged with the responsibility of evaluating its particular field of study of preparing a workable syllabus for schools at different levels, of reviewing text-books and of giving professional advice pertaining to the subject. In short, the Advisory Committee serves as a clearing house for all curricular matters on the one hand and gives views and proposals on professional matters for the decision makers on the other.

15. The Research Unit in the Ministry of Education is mainly concerned with applied and administrative research in order to help solve certain immediate problems (or to help find a way out of predicaments) and to guide the making of certain administrative descisions. The T.T.C. Research Unit concentrates on teacher education and is given a free hand in choosing research topics. The U.S.E. research activities are mainly the work of its staff and higher degree students. Though the educational research situation has improved over the last few years, much research and practical surveys on curricula, syllabuses, textbooks, teaching methods, examinations and pupils' performance etc. have still to be done in order to provide a sound basis for evaluation our educative processes.

16. The aims of teacher education in Singapore have so far not been explictly stated. However, they include the provision of adequately trained teachers in sufficient number to meet the needs of the profession, the instillation of a sense of professionalism in the teacher and a realization of the magnitude of his future tasks and the inculcation of desirable, perhaps essential, qualities such as uprightness of character, courage to speak the truth, devotion to duty, adaptability to changes, tolerance to differences, thirst for knowledge and loyalty to the nation. To these ends the curricula of pre-service training courses include theory of education, educational psychology, educational sociology, methods of teaching, language studies, physical education, art and crafts, audio-visual media, civics and government and various optional subjects in the humanities, the sciences and education. Co-curricular activities such as tutorials and seminars, student council activities, sports and games, student societies, community services, form an important part of a trainee's education in the T.T.C. The curricula of in-service training courses usually concentrate on special areas of interests and needs of the teachers. The question to be asked is how well have we succeeded in achieving these aims.

17. To begin with the T.T.C. being the sole institution for teacher training in Singapore, has at present more than ten types of courses to cater for the requirement of different types of teachers in schools. They are broadly grouped into the following categories:

17.1 *Certificate in Education* (General, Commerce, Music, Home Economics and Technical). These two-year full-time courses are offered in four language media wherever possible and the minimum entrance requirement is a School Certificate with a credit in the language of instruction, a credit in mathematics or a science subject and one other credit. While students in the General course are trained for the primary schools those in other courses under this category are trained to teach special subjects in the secondary schools. The curricular structures have taken due cognizance of the future roles of these trainees.

17.2 *Certificate in Education* (H.S.C. holders). This is a two-year full-time course offered in the Chinese and the English media and the students are trained for the lower secondary classes.

17.3 *Diploma and Certificate in Education* (university graduates). These courses range from one year to three years and they prepare students for the upper secondary classes. As most of them teach in schools these course are run on a part-time basis.

17.4 *Special Courses* (Adult Education

Board teachers, Craft teachers). These are pre-service training courses tailored to the special needs of the trainees.

17.5 *In-Service courses* for all categories of serving teachers. Each of these courses is organised at the request of the Inspectorate, the school principals or the teachers and attendance is voluntary.

18. Certain built-in processess of evaluation of the curriculum exist in the T.T.C.: the formal boards in charge of administration, examinations, studies and other activities and the informal feed-back through tutorials, discussions, and meetings with college staff and students, school principals and teachers and Ministry officials. However, there must be enough qualified professionals to make a proper curriculum evaluation of teacher education. The following are some examples of processes of curriculum evaluation in the T.T.C.:

18.1 To attain one of the main aims of teacher .education i.e. the inculcation of desirable qualities, a student council with elected representatives has been established. Opportunities are therefore provided to the students to exercise self-government in student affairs and to organise various sporting, professional and social activities including community services. In order to help the administration and the student body to develop mutual understanding and to evaluate the training programmes effectively, and to help students to grow and accept responsibility, elected student representatives sit as full members on the Board of Administration.

18.2 As a result of trainees' (both pre-service and in-service) comments and suggestions through questionnaires, at the completion of their training courses, many training programmes have been revised and improved.

18.3 Regular seminars and discussions among staff members on curricula, methods and college procedures have brought about many innovations and much improvement in our training programmes. There is now more flexibility in the size of a class and in the methods used for college teaching, more experimentation in training programmes and student assessment and more long-term planning and re-appraisal of what the T.T.C. does and should do than ever before.

18.4 A forum or platform for the expression and exchange of views and ideas is provided through the College publications. They include findings of the Research Unit, and expository papers and commentaries by staff members and other local educationists on current matters pertaining to teacher education. Many future courses are modified through these writings.

18.5 A conscientious effort is being made to up-grade the professional qualifications of teacher trainers, to ensure that they keep abreast with the latest advancements in education and to define their role as teacher educators in a changing society.

Conclusion

19. It must be pointed out that teacher education programmes generally suffer from the common ill of not having clear-cut objectives and those obtaining in Singapore are no exception. Our training programmes do not cater for individual differences and are still not innovative enough. We tend to give the impression that we are producing teachers who are at once sound in educational theory and good at classroom teaching out of school leavers after only a short period of two years. We further tend to perpetuate the impression among our teachers that once they have been through an in-service refresher course they are automatically catapulted into the vanguard of education. We would have gone a long

way towards achieving our implicit goals of teacher education if the products of our training programmes retain the spirit of enquiry, the humility of learning and the original zeal for teaching and possess the courage to change throughout their life.

CURRICULUM EVALUATION IN TEACHER EDUCATION IN THAILAND

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Institutions and Programs of Teacher Education

In the National Scheme of Education, B.E. 2503 (1960), the Thai Government's policy concerning teacher education is stated as follows:

"The state is responsible for the training of teachers, and should produce those with qualifications befitting their tasks so that the aims of education – may be fulfilled".

Thus, the preparation of teachers is exclusively provided by governmental institutions. These may be classified into two types: certificate-granting institutions and degree-granting institutions. The former consist of junior teacher colleges and teacher training schools which are in the main under the Department of Teacher Training of the Ministry of Education. The Departments of Vocational Education, Physical Education, and Fine Arts also have under their jurisdiction institutions of this type for the preparation of teachers in specialised areas. The latter type of teacher training institutions consists of the College of Education which is under the Department of Teacher Training and the Faculties of Education in most of the universities which are under the Office of the Prime Minister.

The programs offered by the certificate – granting institutions are of two levels. These are

a) The Certificate in Education programs. These consist of two-year programs for students who have completed lower secondary education (Grade 10), and a special one-year program for those who have completed upper secondary education (Grade 12). The purpose of these programs is to prepare teachers for the lower elementary schools or the first four year of schooling.

b) The Higher Certificate in Education programs. These are two-year programs offered by junior teacher colleges for student who have completed the Certificate programs and also for those who have completed upper secondary education. The aim of these programs is to prepare teachers for the upper elementary (Grades 5–7) and lower secondary schools (Grades 8–10).

The degree-granting institutions provide training programs at three levels, namely,

a) The B.Ed. programs which take four years of study beyond the acquisition of a secondary school certificate or a certificate in education. Most institutions also admit persons holding higher certificates in education to the third year courses. The programs offered at this level are elementary education, secondary education, vocational education, rural education, and educational administration.

b) The graduate diploma programs which are one-year courses of study in concentrated fields, for example, English, Mathematics, Audio Visual Education, Educational Evaluation, etc. Eligible for admission to these programs are persons holding a bachelor's degree. The purpose of these programs is to develop proficiency in specialized fields.

c) The M.Ed. programs which are two-year courses of study designed for persons holding bachelor's degrees. If a bachelor's degree is not in the field of education, it is required at the College of Education that the applicant must have had a minimum of 45 quarter credit hours of study in education or in related fields, such as in psychology. Persons holdng a graduate diploma are also eligible for admission to the M.Ed. programs. These students are usually exempted from academic majors which are required of the other students, and may complete the M.Ed. programs in one year beyond the graduate diploma programs.

Some General Features of Teacher Education Programs

All programes mentioned above, except the graduate diploma and the M.Ed. programs, have certain features in common. Among these are the requirements for (1) general education, (2) an academic major and sometimes also one or two minors, and (3) professional course work and student teaching. The proportion of each of these features, however, may vary at different levels, and from one program to another. The table below shows a rough approximation of each of these features at different levels.

Level	General Education	Major and Minor	Professional Education
Certification in Ed.	58%	27%*	15%
Higher Cert. in Ed.	23%	62%**	20%
B.Ed.	45%	29–35%***	20–26%

*These are special subjects, namely, agriculture, home economics, handicrafts, physical and health education, music and drama, Boy Scout or Junior Red Cross, and library sciences.

**There include one major and two academic minors.

***Secondary education students are required to take one major and one academic minor, while those in other areas of specialization are required to take only one academic major and may elect other academic courses to complete the required number of credit hours.

The graduate programs, i.e., the one-year diploma and the two-year M.Ed. programs, which are offered only at the College of Education and at the Faculty of Education, Chulalongkorn University, have different features from those already mentioned. Generally, a diploma program concentrates on the particular subject, such as Geography, Mathematics. In some of the programs courses in related fields essential to the study of the subject may be included. For example, a diploma program in Educational Evaluation focusses on Test and Measurement, Statistics, and Research Methodology, with an addition of a few courses in Psychology.

All M.Ed. programs require a thesis. At the Faculty of Education, Chulalongkorn University, an M.Ed. program is composed of a chosen area such as Elementary Education (between 40 and 60 per cent of the total program), related fields of study specified by the Faculty (between 20 and 40 per cent) and a thesis (20 per cent). Some of the M.Ed. programs offered by the College of Education have similar features, for example, a program in Guidance, but the ratio between the chosen area and the related fields of study varies from one program to another and the thesis consists of 17 per cent of the program. Three of the programs, namely, Teacher and Higher Education, Secondary Education, and Elementary Education, an academic field is required. These programs consist of professional education (33 per cent), an academic field (40 per cent), elective courses either in the professional or the academic fields (10 per cent), and a thesis (17 per cent).

Some Problems Concerning Teacher Education Curriculum

The following are some of the curricular problems voiced by teacher educators.

1. The contents of the science and the mathematic courses are mostly descriptive in nature and somewhat disconnected. Outdated materials are sometimes included.

2. There are unnecessary duplications in

the contents of some professional courses.

3. In many courses, the content outlines consist of lists of topics taken directly from text-books, and seem to have very little relationship to the main objectives – the courses of study. Most of the science curriculums give emphasis to development of the scientific attitude and the scientific methods in solving problems as part of the objectives; the general practice, however, seems to deviate from these important aims.

4. The curriculums are mostly prescribed and crowded with too many requirements. Individual planning with each student is almost non-exist. Each quarter a student is required to take 20–28 credits for undergraduate level and 15–18 credits for graduate level. Individual work or independent study is rather limited since students spend almost all of their time during a week in listening to lectures.

5. Facilities for the teaching – learning process are inadequate. Owing to limited budgets, text books, laboratory apparatus and teaching aids are not sufficient in most schools.

6. Thai text-books are very limited in number. Most of good text-books are in English and are not much used because of the language barrier.

7. The shortage of qualified instructors in specialized fields, especially in the sciences, mathematics, and languages is a serious problems.

8. In most institutions instruction is mainly by the lecture method. Facts and concepts are usually verbally explained. The inquiry method and active participation on the part of students are seldom used in general learning situations.

9. Generally speaking, students entering teacher training institutions are not among the best ones. This usually is the main problem in upgrading the programs.

10. The upsurge of students in evening classes in the various institutions increases the teaching loads of instructors. It does not permit him enough time for thorough preparation of their lessons, trial of new techniques, or careful evaluation of their own work and students' achievement.

11. Continuity from one level to another seems to be lacking in many of the programs. In some programs integration between formal course work and practical work is to be desired.

Attempts to Evaluate Teacher Education Programs

From time to time there have been attempts to restructure and revise the curriculums for teachers with the hope of remedying the situations. These are, however, piecemeal and mainly patchwork. Fundamental analyses of objectives and goals, of the means to these, of the students, and of the various conditions of the school, which will serve as bases for the designs of programs, are needed.

So far, there have only been scattered studies, mostly made by students for their theses.

Recent Developments

Realizing the potentiality of the M.Ed. students for research, the College of Education has, since the end of last year, been encouraging these students to plan and work together in teams in doing their theses, so that this studies may be more extensive and yield more substantive results. Where a nation-wide study is called for, a group of students may share the responsibilities of collecting and analysing data.

The first team-studies being presently undertaken by some of the students center around teacher education. An outline of the various aspects of teacher education including problem areas was cooperatively worked out by writers and the students. However, the latter were given freedom to choose whatever aspects or problems in which they were most interested, and design their own studies with guidance from the writers and other instructors. Among these studies is a follow-up study of the general effectiveness of the certificate programs. The study is undertaken on the request of the Supervisory Division of the Department of Teacher Training with the aims of finding out how satisfied the principals of the various schools are with the competencies and behaviors of the teachers who were graduated from these programs and are now working in the schools, how adequate the teachers themselves think are the preparations they received from the programs, and how much agreement there are between the opinions of the principals and these teachers concerning the latter's performances.

Two other endeavors to evaluate the curriculums in teacher education should be mentioned at this point. Recognizing the need for a re-examination and reorganization of the curriculums for all levels of education, including that of prospective teachers, the Ministry of Education has recently appointed a committee for this matter. Assumably working groups will eventually be formed to carry out the spadework. The other endeavor is the plan proposed by the College of Education for a national seminar on Curriculum Development in Teacher Education which will be jointly sponsored by Unesco and the Ministry of Education later this year. The seminar has as its focus the preparation of secondary school teachers. The objectives are:

(1) to re-examine the objectives of the programmes for the pre-service education of secondary teachers in light of the changing social and economic condition of Thailand.

(2) to analyse and evaluate the aims and objectives, content, teaching methods and evaluation procedures of the programmes currently offered by the various institutions engaged in the preparation of secondary school teachers.

(3) to explore ways and means of utilising new tools and techniques of instruction derived from modern technology to improve the education of these teachers.

(4) to make suggestions for the reorganization and improvement of the curricula for the preparation of secondary school teachers.

Conclusion

From what has been described above it seems fair to say that attempts to systematically evaluate the curriculums in teacher education in Thialand are still meager and insubstantial. This may be due to the need for rapid expansion of teacher education institutions in order to meet the urgent demands for an increasing number of teachers. Judging from past trends, it is estimated that about 10,000 teachers are needed each year for elementary schools and about 40,000 for secondary schools and teachser taining institutions at the certificate levels, apart from those for higher institutions. However, the writers firmly believe that a careful and thoughtful effort to systematically analyze and evaluate the existing programs are fundamental for their reorganization.

CURRICULUM EVALUATION IN TEACHER EDUCATION IN THAILAND: A CASE STUDY

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Introduction

There are, at present, two types of institution of higher learning preparing teachers at the degree level: the College of Education of the Ministry of Education and the universities under the jurisdiction of the Prime Minister's Office. Among the nine existing universities, five are engaged in preparing teachers at the undergraduate level and one offers both the undergraduate and graduate programs leading to the Master of Education Degree. These six universities having the Faculty of Education include:

1. Chulalongkorn University – starting program in 1957 and M.Ed. program in 1961
2. Chiengmai University – starting B.Ed. program in 1966
3. Songkhla Nakarin University – starting B.Ed. program in 1968
4. Khonkhaen University – starting B.Ed. program in 1969
5. Kasetsart University – starting B.Ed. program in 1970
6. Silpakorn University – starting B.Ed. program in 1970.

Of these six universities, only Chulalongkorn and Chiengmai have already produced graduates with Bachelor's Degree in Education. The other four universities will eventually produce their first group of graduates in 2 or 3 years. This signifies that teacher education is still in its infancy in most Thai universities having the Faculty of Education. The teacher educators are, therefore, more concerned with the implementation aspect of curriculum development in teacher education than its evaluation phase.

It is interesting to note that since the introduction of the baccalaureate program of teacher education into the university in the past decade, the curriculum evaluation program has not been given due attention and consideration. This is due to a pressing demand for qualified teachers and the heavy burden imposed upon the teacher training institutions to expand quantitatively. Among the six universities preparing teachers, it has been found that only at the Faculty of Education of Chulalongkorn University that a somewhat systematic evaluation of the teacher education curriculum was launched in 1968 and still in operation. It is, therefore, the purpose of this paper to focus on the evaluative aspect of the curriculum development in teacher education of this particular institution – presenting as a case in the country report.

Curriculum development strategies

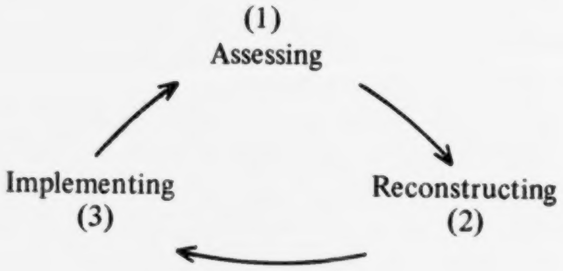
The Faculty of Education, Chulalongkorn University advocates the following viewpoints with regard to curriculum development and evaluation:

1. Curriculum development is a continuous process
2. Curriculum evaluation is just one phase of the total process of curriculum development.
3. The "system-wide" approach to curriculum development is more appropriate and effective than other approaches.

With these underlying principles, a Curriculum Committee was set up in 1968 to do the overall curriculum planning for the Faculty. The immediate task was to draw up the master plan for curriculum revision. The committee adopted a three-phase plan for curriculum improvement comprising:

Phase 1 : Status assessment
Phase 2 : Reconstruction of the exisitng curriculum
Phase 3 : Implementation

These three phases can be put in the form of cyclic order:



This means that the curriculum development must have gone through these processes. To date, we have completed phase one and part of phase two. The phase one activities were evaluative in nature. In order to obtain as much information as possible, about the strengths and weaknesses of the existing curriculum, four groups of people were asked to provide the feedbacks. They were (1) all the instructors of the Faculty, (2) the graduating classes who had gone through the student teaching program (3) representative sample of the graduates (4) representative sample of the employers. The assessment data were obtained through use of questionnaire interview, and organized seminars for the curriculum evaluation purposes. Two seminars were conducted towards the end of last year: *The Alummi Seminar and the Faculty Seminar.* Through these means the assessment data were compiled and used as a basis for the second phase of curriculum development, that is the reconstruction of the curriculum.

The status assessment yielded four significant findings:

1. There was a call for more depth in the specialized teaching area.
2. It was found that there were unnecessary duplications of the contents in the professional courses.
3. There was a very remote relationship between theories and practices. Most of the theories could not be applied to the real situation.
4. There was a serious concern on the part of the instructors and the employers about the graduates' professional attitude and ethics.

Some concluding remarks

Even though a somewhat systematic evaluation of teacher education curriculum focussing on product evaluation has been undertaken, it is just a beginning and still far from being adequate substantively and methodologically. Lack of the performance criteria to evaluate against, lack of research on teaching, and lack of the technical knowhow on the part of the teacher educators with respect to curriculum evaluation techniques constitute major problems and obstacles. However, the obtained assessment data, subjective as they are, will undoubtedly provide one of the bases for further curriculum improvement. The curriculum evaluation in teacher education is now an immediately important goal and will still be an important goal in the years to come.

CURRICULUM EVALUATION IN TEACHER EDUCATION: PERSPECTIVES AND PROBLEMS IN DEVELOPMENT STUDIES

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The purpose of this paper is to direct attention to questions of the role of teachers in the educational process in the context of the interlocking problems of social, cultural, economic and political development in developing societies, and what curricula would be appropriate to the strengthening of this role. Arising from this is the question of *what* to evaluate in the courses offered under Development Studies and *how* this evaluation might be carried out.

2. The framework of this discussion is delineated by a brief outline of some of the problems of educational planning and the conventional role assigned to teachers, and the objectives of the programme in Development Studies as part of the general courses in the Faculty of Education. In this discussion implicit reference is made to the paper by J.E. Lynch, 'Curriculum Evaluation in Teacher Education: Psychological Dimensions'.

3. It is now recognised that societies are underdeveloped because their people are underdeveloped. Their social economic and political organization is such that the majority have been left to languish in ignorance, superstition, ill-health, disease, poverty and apathy. The root cause of this condition has been traced to the neglect of education and the training of people to take part in the development of their society. The passion for economic development and political modernization, following the universal impulse toward political emancipation from colonial rule, however, has brought about a revolution in the attitude of the new elites as well as the masses to education. Education is seen as the key to modernization, and millions of children now have the opportunity to go to school. Somehow it is felt that education will provide the driving force for economic development, and therefore the more education there is the better it must be for the country. But the economic miracle that was so eagerly expected did not, in most cases, materialize mainly because education was wrongly conceived and inefficiently inplemented. What seemed to have been misunderstood was that it was not education *per se* but the *kind* of education relevant to economic development that was important.

4. Illustrations of this naivete about education may be seen in the development plans drawn up in the recent past by governments in the developing countries. These usually revolved around a number of programmes to invest capital in different sectors of the economy, with a substantial proportion left to the predilections of *private* investors. These development plans might be integrated or coordinated with varying degrees of success with the annual budget and foreign exchange availabilities, but seldom had the manpower implications been carefully worked out. It was assumed that the existing educational system, established fifty or a hundred years ago with very little change in the intervening period, would be able to supply the needs of a rapidly changing society. A telling point is that in the annual estimates education would be subsumed under 'Social Services'. Planners seemed to be concerned mainly with the aggregate expenditure on education, both on current and capital accounts, without much apparent attempt to analyse how much of these expenditures would really contribute towards economic development. The result, more often than not, was a misallocation of scarce resources to the development of educational 'services' which made no immediate impact on the economic development programmes. Indeed, with the

swelling tide of unemployable school-leavers social problems were apt to deteriorate into political unrest. The traditional concept of education soon came under severe criticism by educationists, sociologists as well as economists.

5. The result has been a remarkable spread of the idea that a country must have educational planning to maximize the development of human resources. But like economic planning in the immediate past, educational planning today tends to focus attention on aggregates of student enrolments it various levels of schooling, with aggregate numbers of teachers based on broad teacher-pupil ratios. In more sophisticated planning there may be attempts to analyse the kinds of teachers by subject-specialization within the main categories of the teaching force, and appropriate training programmes are established to produce such teachers. But the analysis tends to stop at simplistic ratios like 2:3 for teachers in the sciences and the humanities, with no further breakdown to establish priorities for teachers of physics, chemistry, mathematics and biology; or for teachers of history, geography, languages, religion, economics and so on. Underlying these educational plans is the wide-spread belief, as an article of faith, that education somehow promotes economic growth, and this is expressed in the current cry for science and technical education.

6. These trends are almost universal in the developing societies, but there has been no evidence of any attempt to rationalize the role of teachers *over and above* their conventional function as purveyors of information and knowledge in the overall process of training the nation's human resources. If education indeed is the key to modernization, then clearly teachers are of paramount importance to the overall development plans. But they are simply taken for granted as one of the 'inputs'. It is implicitly assumed that if the teachers are adequately trained in methods of teaching and in the 'subjects' they teach (such as mathematics or science or geography), it would be sufficient to ensure the output of a certain quantity of 'trained' or even 'skilled' manpower. To be sure, an increased output of manpower trained in the sciences and technology is necessary if the demand for such manpower in both the public and private sectors is to be met and economic grwoth is to accelerate, but what seems to be missing in current training programmes is the *psychological* component to development. Science and technical education, without a corresponding understanding of the problems of development among the recipients of that education, may fail to maximize the capacity of the younger generation to make the fullest and most imaginative use of the vast and ever-expanding body of knowledge in science and technology.

7. The philosophy and content of education in any country are generally assumed to be a reflection of its social and cultural values, the outcome of its history and technological progress. This assumption is valid where the technologically advanced societies are concerned. In the case of the developing societies there is little basis for this assumption for the simple reason that modern, scientific education is largely imported from abroad. The reliance on textbooks dealing with science and technology underscores this fact. What the developing countries do is to graft the content of modern education onto a social system with deeply ingrained values which may be in strong disharmony with the values implicit in the science and technology of the West. Learning to drive an automobile is relatively easy because it is mechanical, but internalizing the social values of an industrial society which has produced the automobile is an entirely different matter.

8. At a different level, there is often a disjuction between what are purported to be urgent national problems and the practical steps taken to solve them. In most of the developing societies, the population is said to be increasing so rapidly as to erode or cancel out gains in economic growth measured by per capita income, but little is done in the schools to include a programme of studies in population problems. Economic development is the overriding concern of governments, yet there are few schools which include, at least at upper secondary level, any studies in the

problems of poverty and underdevelopment and the social and economic factors which promote development and which would create greater wealth for the people. The demonstration effect of the developed nation is to whet the appetite for consumer goods, but little is done in schools to stress the fact that savings and investment *now* would have a better chance of ensuring a higher standard of living *later*.

9. The psychological component of the development process involves a complex array of attitudes and values, the propensity for rational thinking and problem-solving, a pragmatic approach to problems and the capacity for change when change is considered necessary. In the normal course of the educational process it is assumed that these attitudes and values are imbibed by students, and no doubt many intelligent ones do, but for the majority the assumption may be based on wishful thinking. The preoccupation of the vast majority of students in formal educational institutions is not with these rather indefinable qualities but with 'facts' which are reproduceable at examinations, since obtaining the appropriate paper qualifications would determine their employment opportunities. Such is the pervading ethos of schools and educational systems that the majority of teachers seem to suffer from the same obsession. But the blame cannot be put entirely on the teachers, who claim they are merely being 'practical' and 'realistic' in responding to their perception of what the educational system and the society as a whole expect of them. From this point it is a small step to making education an anti-developmental process, retarding rather than accelerating the modernization of traditional societies. In such a milieu it is not difficult to see how teachers consciously or unconsciously reinforce precisely those attitudes and values which have underpinned the condition of underdevelopment from which the governments of the new nations are so strenuously trying to escape.

10. Because we believe that teachers are *the* key to the education of the new generations of young people who should not only be 'skilled' in technology and the sciences but also responsive to the ideals of economic and social development which is part of the total process of national reconstruction, we consider that it is of paramount importance that they should play a more dynamic role as change-agents. Historically teachers in the developing countries have been some of the most effective change-agents in the midst of age-old traditions: when schooling was elitist, they were responsible for the emergence of the new social and political elites. Now that education has become egalitarian, they have contributed to the 'revolution of rising expectations' among the masses, and this carries serious social and political implications where employment opportunities are limited by a relatively slow rate of economic development. In an age when the social order was relatively static, the mere dissemination of book knowledge from the West was catalytic enough to set moving those social and economic forces which have transformed traditional societies. But the rapid changes in these societies now require teachers to be more than mere transmitters of book knowledge. Their role as change-agents must be re-cast to include the transmission of new ideas, attitudes and values consonant with the urge towards rapid economic growth.

11. It is with this new role of teachers in mind that the course in Development Studies was initiated. The focal point of this course is the analysis of various aspects of modern education in relation to contemporary problems of social, cultural, economic administrative and political development in the developing nations, with special reference to Malaysia. There are four electives within the course: Adult Education, Libraries and Development, Educational Administration, and Human Resource Development. The course in Adult Education aims at inducing an awareness among graduate teachers of the need for continuous learning is an era of the 'knowledge explosion' and an understanding of the relationship between individual development and national development. It includes an examination of the various schemes of adult education in various parts of the world and the methods employed for programmes ranging from literacy campaigns to the 'University of the Air'

in the United Kingdom. The course in Libraries and Development is designed to give teachers a working knowledge of developments in library systems and techniques of librarianship and an understanding of the central importance of a school or community library in the dissemination of knowledge and the development of individual abilities, particularly the basic skills of the trained teacher. The objectives of the course in Educational Administration are to introduce teachers to the basic concepts and practices in educational administration, and to provide them with an understanding of contemporary problems in the organization of education within the framework of current developments in political modernization, economic planning, and professional change in the teaching profession. The course in Human Development is designed to develop insights into some of the major obstacles and catalysts in the modernization process and the role of education in developing human resources which underpin this process. It includes elementary exercises in educational planning.

12. To provide teachers with an overview of interlocking problems of the various aspects of development as dealt with under the above elective courses within Development Studies, a series of core lectures is given by the lecturers, and teachers may choose to concentrate on any one of the electives, which are conducted as seminar courses in which teachers are expected to participate actively in the analysis of problems relevant to the central theme of development of the new nations. Teachers are evaluated on the basis of two written exercises. The first is based on the core lectures and their ability to relate key issues in development problems. The second involves some research into the literature dealing in depth with some particular aspect of education and development.

13. Clearly teachers in the course are evaluated for their ability to acquire relevant information and to organize this into concepts and principles. In the process it is expected that they would form value judgments which may indicate their own attitudes and values as individuals and as teachers. The relative success of the curriculum may thus be gauged from the performance of the teachers in the two written exercises. But the other set of objectives – the teachers' transmission to the pupils they teach of concepts and principles, attitudes and values which they have developed and hopefully internalized – cannot be evaluated in any meaningful way mainly because the year complicated by a host of intervening variables. The implicit aim is to bring about a change of attitudes and values in the thousands of children whom they teach over a period of time. Since the elective courses in Development Studies are not part of the general school curriculum, the teachers will not be teaching those 'subjects'. All that can be hoped for is an *incidental diffusion* of those attitudes and values which pertain to development problems. Indeed, even if it were possible to measure significant changes in attitudes and values in the next generation, on what basis could we attribute these changes to the work of teachers? It is rather like introducing fluoride into the water supply of a city in the hope of reducing caries and other dental troubles in the population. If there were an improvement in the population's dental health, could this be attributed only to the introduction of fluoride into drinking water? Should not other factors like improved diet and dental hygiene also be considered? Notwithstanding these knotty problems, it is possible to isolate other variables and to evaluate their part in improving the dental health of the population. But there are no fool-proof instruments for isolating and identifying those variables responsible for changes in attitudes and values in a population. It would appear that social and economic planners in general, and teachers in particular, will have to be content with the *evidence of change* in the society and merely theorize about the causes. But for those concerned with a scientific evaluation of the effectiveness of education in bringing about social and economic change, this condition is cause for dissatisfaction, since this would leave many programmes for social and economic development without the benefit of 'feed-back' information which could modify and improve future

programmes. In other words, the predictive value of any educational programme for other words, the predictive value of any educational programme for changes in attitudes and values would be weakened by the lack of precise information about possible outcomes.

14. The lack of scientific instruments for evaluating or measuring social and psychological changes in people, however, is no reason for abandoning efforts to bring about change. Clearly change is the cumulative result of pressures of all kinds from all directions, most of which are outside the school. But the fact remains that the teacher occupies a central position as a change-agent in the educational process. His real or potential influence should not be underestimated. We consider that there is an urgent need to redefine the role of the teacher in the development process, and with this redefinition as a guide, to revamp teacher education so that teachers may play a more positive role in promoting the social, economic and political development of the new nations.

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CURRICULUM EVALUATION IN TEACHER EDUCATION – PSYCHOLOGICAL DIMENSIONS

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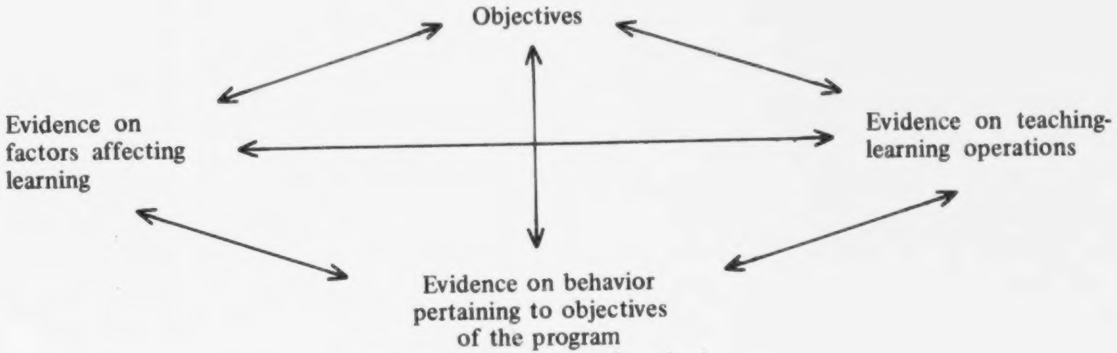
Due to the nature of education and the nature of the workers in the field, a scientific evaluation of teacher education curricula is impossible. The scientific method is characterized by experimental results which are reproducible and independent of their observer; furthermore, the quantitative measurements must be precise and the descriptive terminology must be unambiguous. Until these conditions are attained, evaluation will remain deceptive and biased.

In spite of our inability to be scientific, educationists continue to employ the tools of the scientist. Taba has presented the following model for curriculum evaluation (1962):


Objectives
Evidence on factors affecting learning
Evidence on teaching-learning operations
Evidence on behavior pertaining to objectives of the program

(adapted for teacher education)

This model supposes: (1) the selection or construction of the needed evaluating instruments and procedures; (2) the analysis and interpretation of data in order to develop hypotheses regarding curricular changes; and (3) the means for converting hypotheses into action.

Taba further lists six criteria which constitute the characteristics of a valid evaluation program:

1. evaluation must be consistent with objectives;
2. evaluation must be comprehensive
3. evaluation must be diagnostic
4. evaluation results must be valid
5. evaluation judgments must result from unified procedures
6. evaluation must be a continuous process.

She is aware of the unscientific realities of curriculum evaluation. To soften this she suggests, "The validity of evaluation instruments tends to improve in the measure in which they are consistent with objectives, are based on a sufficiently careful analysis of the behaviors to be evaluated, and are addressed to what the students have had an opportunity to learn."

A NARROW BASED CONCEPT OF EVALUATION

A narrow and often used method of curriculum development would be the calculation of a student's grade in terms of the amount of information he has acquired as determined by an arbitrary test. A broader more difficult concept of curriculum evaluation would not limit itself to an interpretation of information acquired but would also evaluate the teacher's critical thinking, values and attitudes, sensitivities, and skills. This broader evaluation would also consider the choice of materials and teacher methods as well as random learning resulting from the choice of materials and methods.

Evaluation of the Acquisition of Information and Knowledge

A distinction between information and knowledge should be made. Information is considered to be that part of a communicated message which conveys something meaningful, but not always or completely true, to the recipient. Knowledge is the end product of an individual's ability to organize random bits of information into concepts and principles. Learning of concepts depends upon a person's ability to organize similar words by way of function or design. Both the acquisition of information and knowledge produce a change of behavior in the learner. This behavior change is easily measured and the quantity of behavior change measured can be used as an evaluation of a curriculum. Although the narrow based concept of evaluation might appear limited in scope, at the same time it has the advantage of being functional by realistically concentrating on only one area of the educational process, the acquisition of information and knowledge.

A BROAD BASED CONCEPT OF EVALUATION

But there is more to the process of education than the acquisition of information and knowledge. The process by which this information and knowledge is acquried is important because of the random learning which takes place as a result of this process. In the process of acquiring information and knowledge, a student should also be learning how to think critically, gaining appropriate values and attitudes, and gaining skills. A broad based concept of evaluation would include all these aims of teacher education.

Evaluation of a Teacher Education Program and Process

Cronbach (in Heath 1964) believes that evaluation for course improvement involves using information about materials and methods to determine behavioral changes. This information should be broadly collected and is most influential if acquired for use during the development of the course or program. Consequently, evaluation should go beyond the immediate content as attested by scholars. In order to perform this type of evaluation, an item analysis of a wide range of responses to questions is more informative that a composite score given to those who have all taken the same test. Random samples of interviews and essay question answers may also serve as instruments of a broad-based evaluation.

The Relation of Objectives, Conditions of Learning, and Evaluation

One of the basic problems in the formulation of educational objectives and the designing of appropriate evaluative techniques is the lack of a common frame of reference to guide thinking. This is a problem of any group at work in these areas, and it becomes a compounded problem in the communication between any two groups. The problem is that commonly used terms mean different things to different educational workers. A notable example is the objective, "to develop the ability to think critically." It is of course impossible to evaluate objectives which are poorly defined.

The Taxonomy of Educational Objectives, developed by Benjamin Bloom and others, is an attempt to provide structure in this area. It consists of two domains, the *Cognitive Domain* (1956) which is structured on the principle of simple to complex, and the *Affective Domain* (1964) which is structured on the principle of internalization. The *Taxonomy* attempts to do several things: (1) it specifies major and minor classifications; (2) it provides descriptions of the kinds of objectives that fall into the various classifications; (3) it gives examples of educational objectives (appropriate to the various classes); (4) it suggests how these different objectives can most appropriately be evaluated; and (5) it provides illustrative test items.

The following summary of the *Taxonomy*

may provide a review or an introduction to this area. The summary lists the major classifications of the *Taxonomy* (e.g., 1.0 Knowledge), gives a general definition of the class (in parentheses), and provides an illustrative educational objective. Hopefully this will suggest the kind of thinking that must precede effective evaluation in education.

Cognitive domain

1.0 Knowledge (includes these behaviors and test situations which emphasize the remembering, either by recognition or recall, of ideas, material, or phenomena). The recall of major facts about particular cultures.

2.0 Comprehension (emphasis is on the grasp of the meaning and intent of the material). The ability to interpret various types of social data.

3.0 Application (emphasis is on remembering and bringing to bear upon given material the appropriate generalizations or principles). The ability to apply social science generalizations and conclusions to actual social problems.

4.0 Analysis (emphasis is upon the breakdown of the material into its constituent parts and detection of the relationships of the parts and of the way they are organized). The ability to recognize unstated assumptions.

5.0 Synthesis (the putting together of elements and parts so as to form a whole). Skill in writing, using an excellent organization of ideas and statements.

6.0 Evaluation (the making of judgments about the value, for some purpose, of ideas, works, solutions, methods, material, etc.). The ability to identify and appraise judgments and values that are involved in the choice of a course of action.

Affective domain

1.0 Receiving, attending (concern that the learner be sensitized to the existence of certain phenomena and stimuli; that he be willing to receive or to attend to them). Recognition that there may be more than one acceptable point of view.

2.0 Responding (concern with responses that go beyond merely attending to the phenomenon. The student is sufficiently motivated that he is not just willing to attend, but that he is actively attending). Contributes to group discussion by asking thought-provoking questions or supplying relevant information and ideas.

3.0 Valuing (the phenomenon has worth to the individual. He values it). A sense of responsibility for listening to and participating in public discussion.

4.0 Organization (As the learner successively internalizes values, he encounters situations for which more than one value is relevant. Thus necessity arises for (a) the organization of the values into a system, (b) the determination of the interrelationships among them, and (c) the establishment of the dominant and pervasive ones.) Relates his own ethical standards and personal goals through the reading of biography and other appropriate literature.

5.0 Characterization by a Value or Value Complex (value hierarchy is organized into a consistent system which has controlled the behavior of the individual for a sufficient time that he has adapted to behaving in this way). Readiness to revise judgments and to change behavior in the light of evidence.

Gagne (1965) states that in deciding on the conditions for learning, one must first define the objectives which are the changes in behavior that are sought. In order for objectives to be meaningful, they must be defined in terms of observable human performances. Rather than merely stating objectives, they must be defined operationally.

Such a definition seems to have the following components:

1. a verb denoting observable action;
2. a description of the class of stimuli being responded to;
3. a word or phrase denoting the object used for action by the performer;
4. a description of the class of correct responses.

Cronbach (1963) suggests four approaches to evaluation:

1. systematic observation by the teacher trainer of trainee's accomplishment during the try-out stage of a new course or subject;
2. process studies of events taking place in the lecture hall;
3. attitude and proficiency measures of changes in student meanings and beliefs, and increases in all types of proficiency that might be reasonably expected, not just selected outcomes;
4. follow-up studies of the later careers of those who have participated in the course. Although far removed from the instruction, they come closest to observing the ultimate educational contribution of the course.

What does it mean to evaluate an objective? At a minimum it means that behaviours by which an objective is defined are not found to be in gross contradiction to a major value (a criticized interest). For example in training teachers, it is expected that each will do a minimum amount of research by gathering background information on the students they are teaching. One or more of the initially formulated behaviours which are to define this objective, however, allows the teacher to deceive his students as to the complete use of the gathered data. Reasons given include the furtherance of knowledge and the like. Reflection indicates that this behavior conflicts with a major value, truthtelling, which as a criticized interest indicates that deception – over time – has a destructive quality. If this situation is clearly considered before the outcome is implemented, it is hypothesized that the behavior will be so modified as to at least minimize the deceptive elements. It is merely an affirmation of a belief that reflective examination of the relationships of posited objectives and held values before action is taken will give the most viable outcomes.

Similarly, what is meant by "evaluating a procedure?" The materials, methods, and activities which support the procedure are made as consistent as possible with posited objectives. This consistency is also necessary to viable outcomes.

The job of evaluation is to collect and use facts to develop better teacher education programs and to gain a deeper understanding of the educational process.

Ways evaluation may be used are:

1. to measure each expected outcome separately, while avoiding the mistakes of agglomerating many types of post course performance into a single score;
2. to improve a course being constructed by constant evaluation;
3. to determine which ingredients of a new course are responsible for its advantage over an old course (this also keeps the curricula from becoming a monolithic movement when older or traditional curricula are dispensed with (Goodlad, 1964);
4. to measure the amount of transfer, both to a wide variety of new situations (lateral) and the increased ability by the student to learn higher-order principles.

Evaluation of Reasoning and Value Judgments

The two most difficult areas of the curriculum to evaluate are critical thinking and value judgments. The main problem in evaluating these two areas arises out of the fact that there is a tendency to view critical thinking and values as absolutes when in reality they should be viewed on a sliding scale. What is logical for one person might be illogical for another. What might be acceptable value for one might be unacceptable for another. Also, the terminology used in discussing critical thinking and values is ambiguous. In the area of critical thinking such terms as imply, infer, interpret, generalize, analyze, create, and appraise are used. These words, because of their varied meanings, are vague. In a discussion of values such abstract concepts (nouns) as appreciation, cooperation, courage, beauty, fair play, faith, honesty, and responsibility are used, These words carry different meanings for different people at different times and places. Consequently, any evaluation of critical thinking or value judgments would have to be highly individualized and take into consideration not only a person's objective actions but also the immediate time and place as well as previous circumstances which lead to this behavior. Evaluation tools such as the Watson-Glaser Critical Thinking Appraisal and the Osgood Semantic-Differential Scale have obvious limitations because of their inability to evaluate, in depth, absolute or fixed behaviors.

Summary

It is held that evaluation is not a process that is applicable to outcomes alone. Nor are the difficulties of this formulation alleviated by stating generally that evaluation should be undertaken "constantly". Rather it is necessary that an explication be made of the loci of evaluation – and these loci are seen to be (minimally) the relation of values and objectives, the relation of objectives and procedures, and the relation of objectives and (actual) outcomes. With all these factors taken into account, it can be hypothesized that plans of action will have greater predictive value and that, in fact, the evaluation of actual outcomes will supply valuable information helpful in making decisions about the teacher training program.

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CURRICULUM EVALUATION IN TEACHER EDUCATION: PERSPECTIVES & PROBLEMS IN COMPARATIVE STUDIES

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Introduction

Comparative studies in education aim at applying the comparative approach to the study of educational phenomena. Comparison is not an end in itself. Comparison should lead to classification, and the latter to the expression of "laws".

The process of comparison involves putting the 'things' to be classified side by side and then taking note of the similarities and differences. Evidently the method of classification is influenced by the prejudices of the classifier and can never be entirely objective. But at the back of the classification, there is always a hypothesis or theory or model of some sort. Classification has for end the framing of general statements (or the expression of laws) which alone is significant and helpful.

Comparative studies in education can deal with comparison of systems of education on the basis of *space*. This could be of nation-states (Education in Malaysia and Singapore) or of some other geographical grouping, for example, a region (Education in Southeast Asia). It is also possible to compare systems of education at different periods of *time*. Thus one could make a comparison of the provision of education in Malaya before 1941 and after 1957.

Methodology[1]

The methodology of comparative studies may be broadly classified under two headings: one, which is used in area studies, and two, in comparative studies.

Area studies: An area study describes the educational system or practices of one particular country. A *descriptive* study of the supervision and evaluation of student teaching[2] in Malaysia, for example, would list the educational data under the following:

a) The persons primarily responsible for the supervision of student teaching;

b) Others who co-operate in the supervision;

c) The extent of supervision;

d) The procedures used in supervising teaching practice;

e) The assessment of teaching practice; and

f) The supervision and evaluation of aspects of student teaching other than teaching practice.

The study can be made not only descriptive but also interpretative by a critical analysis of the educational data. For example, an *interpretative* study of the supervision and evaluation of student teaching would also involve an analysis of each item listed above, against the background of other determinants of educational policy like social, economic, political and cultural backgrounds of the country concerned.[3]

Comparative Studies: A report of one country is an area study whether it be purely descriptive or interpretative, or both. Likewise writing several reports for several countries is merely listing one report after another and, as such, are still area studies. For example, in making a study of *"The Aims and Objectives of Student Teaching"* in the Republic of China, India, Pakistan, and the Philippines, one could list the aims and objectives for each country as follows:

In the *Republic of China* The Ministry of Education has outlined the objectives of student teaching as 1. To make students aware of the objectives and scope of teaching in the elementary school; 2. To give students experience of teaching and guidance in the elementary school; 3. To acquaint them with the management and administration of the elementary school; and 4. To give them some experience of social education. In *India* The All-India Seminar on the Elementary Teacher Training Programme held in 1963, lists the objectives of student teaching as 1. To enable the teacher trainee to explore and utilize effectively the teacher-learning situations in relation to school, home and neighbouring community; 2. To enable him to work for his own professional growth and improvement of teaching skills after the completion of his training by utilizing the school and the community resources; 3. To enable him to assess pupil growth and development; and thus 4. To help him in promoting the growth and all-round development of the child.

In *Pakistan*, the following were the objectives of the student teaching programme issued by the Institute of Educational Research of the University of Dacca. 1. To develop a greater degree of mastery of the subject matter to be taught in the classroom; 2. To develop an increased understanding of educational principles and of their implications for teaching; 3. To develop skill in the use of the fundamental procedures, techniques, and methods of teaching; 4. To promote the development of a thoughtful and alert student of education as well as to make each student efficient in teaching; 5. To develop, in each student, desirable teaching personality traits and personal relationships with others – administrators, teachers, parents, and students; 6. To develop desirable professional interests, attitudes and ideals relative to the educational professions; and 7. To develop an understanding of educational psychology and the psychological aspects of childhood and youth.

In the *Philippines*, the objectives of student teaching outlined by the Philippine Normal College were 1. To give the student teacher a chance to put into application the theories, precepts, principles, and techniques which he has learned in his college courses; 2. To give the student teacher an opportunity to synthesize facts, ideas and skills into a whole which eventually comprises the entire pattern of successful teaching; 3. To help the student teacher to form a sound philosophy of education which will aid him to crystallize some professional attitudes and ideas; 4. To actually bring the student teacher in intimate contact with children; and 5. To serve as a laboratory for testing the student teacher's fitness for the teaching job.[4]

The first step in making a comparison is what Bereday calls *"juxtaposition"* which consists of listing the classified data with a view to finding a unifying concept or hypothesis. Thus in the study of *"The Aims and Objectives of Student Teaching,"* it would be comparative treatment if the selected material were analysed so as to bring out the similarities and differences under this heading, and the results summed up. Thus, if we juxtapose the various statements reproduced above, we could classify the objectives of student teaching into the following:

Objectives
relating to:
a) the development of the ability to translate theory into practice;
b) the development of a fuller and a better understanding of the psychology of children;
c) the development of self-confidence, initiative and resourcefulness to do a creative job of teaching;
d) the development of an understanding of the varied roles that student teachers will be called upon to assume when they become regular teachers, and
e) the development of a more realistic view of their tasks as teachers by familiarizing them with the actual conditions and problems in the field; and
f) the development of wholesome professional attitudes and good human relations

to be able to deal effectively with their pupils, their colleagues and the people of the community which they will be serving.

After juxtaposition comes complete comparison which uses either a) the problem approach or b) the total analysis approach. The former involves the comparative analysis of the similarities and differences of one theme throughout the representative systems. This methodology has been used by the editors of the World Year Book of Education. Thus for 1948, 1949, and

1950 – The Effects of the War on Education
1951 – Occupational Selection and Differentiation through Education
1952 – The Reform of Education
1953 – The Social Position of Teachers
1954 – Education and the Transformation of Societies
1955 – Guidance and Counselling
1956 – Education and Economics
1957 – Education and Philosophy
1958 – The Secondary School Curriculum
1959 – Higher Education
1960 – Communication Media and the School
1961 – Concepts of Excellence in Education
1962 – The Gifted Child
1963 – The Education and Training of Teachers
1964 – Education and International Life
1965 – The Education Explosion
1966 – Church and State in Education
1967 – Education and Planning
1968 – Education in Industry
1969 – Examinations
1970 – Education in Cities

The other approach is total analysis. It is only after long practice in handling area studies (descriptive and interpretative) and comparative studies (juxtaposition and the interpretative) that the student of comparative education is in a position to compare in total analysis. An example of such an attempt would be if we were to study *"The Relation of Student Teaching to the Courses of Study in the Teacher Training Curriculum"* under the following stages: first, to list the general education courses of the countries under study as shown in Table 1.

Second, to compare them under two headings a) how the general education courses in the curriculum prepare the students for their student teaching programme and b) how the professional education courses prepare the students for their student teaching responsibilities.

Under (a) we can see from Table I, that the courses most often cited as having a significant bearing on the student teaching programme are the Language Arts, Mathematics, Science, Social Studies, Music, Art Crafts, and Health and Physical Education. In fact these are also the subjects in the elementary school curriculum. In India, there are no courses in general education as such; instead, the students study what is called "remedial teaching in the content subjects", which really mean a recapitulation of the contents of the primary school curriculum.

Under (b) the professional education courses can be tabulated as follows:

Burma	:	Theory and Practice of Education, Child Psychology, Educational Psychology, School Administration.
Ceylon	:	Principles of Education, Educational Psychology, (including Educational Guidance), General Methods of Teaching, Special Methods of Teaching.
Republic of China	:	(three-year course), Educational Psychology, Sociology of Education, Comparative Education in the Elementary School, Modern Educational Thought.

Table 1: The general education courses which serve to prepare students for student teaching+

Country	Language Arts	Maths	Science	Social Studies	Music	Art and Craft	Health & P.E.	Domestic Science	Agr.	Other Areas	Remarks
Burma				* (Burmese way to Socialism		*	*	*			
Ceylon	* Sinhalese (for Sinhalese speaking students) Tamil (for Tamil) speaking students		* General Science	* History & Civics or Geography	*	*	*	*	* (For men)		
China, Rep. of (Three-year course)	* (both Chinese and Mandarin)			* (History; Civics; 3 Principles of the People)			*			Military Training; Electives	
China, Rep. of (Five-year course)	* (both Chinese and Mandarin)	*	*	* (History; Geography; Civics; 3 Principles of the People)	*	*	*			Military Training; Logic; Electives	
India											Remedial teaching in the content subjects
Malaysia	* (Main & second Language)	*	* (General Science)	* (History Geography)	*	*	*				
Pakistan	*	*	*	* (History; Geography)		*	*			Religious Education	
Philippines					*	*	*				
Singapore	*	*	*	*	*	*	*				
Thailand	* (Thai & English)	*	*	*		*					
Vietnam			* (Scientific Experiments)			* (Drawing & Handwork)	* (including Hygience & First aid			School Youth Activities	

+ Student Teaching Practices in Primary Teacher Training Institutions in Asia, UNESCO, Bangkok, 1969, Ibid pp. 46–49.

(five-year course), Introduction to Education, Educational Psychology, History of Education, Comparative Education in the Elementary School, Sociology of Education, Philosophy of Education, Educational Tests and Statistics, Audio-Visual Education, Health Education.

India : Educational Psychology, Child Psychology, Methods of Teaching (General and Special), School Administration and Organisation.

Malaysia : Principles of Education, Child Development, Human Behaviour, Methods of Teaching.

Pakistan : Principles of Education, Child Development, Special Methods of Teaching.

The Philippines : Principles of the Teaching-Learning Process, Teaching in Vernacular, Development of the Elementary Curriculum, Understanding the Learner, Evaluation Techniques, Audio-Visual Education, Children's Literature, Teaching English as a Second Language, the Teaching of Music, Art Education.

Singapore : Principles of Education, Educational Psychology, General Methods, Special Methods of Teaching, Audio-Visual Education, Speech Training.

Thailand : Human Growth and Development, Educational Psychology, Introduction to Thai Education, Audio-Visual Education, Evaluation in Education, School Health, General Methods of Teaching and Observation, Speical Methods of Teaching the following subjects: Language Arts, Social Studies, Science, Arithmetic, Art and Music.

Republic of Vietnam : General Pedagogy, Specialised Pedagogy, Psychology of Education, Professional Ethics.

From the above tabulation we see that the most frequently mentioned courses are: Child Psychology or Child Development, Principles of Education or Introduction to Education, General Methods of Teaching, and Special Methods of Teaching. Courses which have been mentioned only once but which can be very helpful to students are Children's Literature (Philippines), Speech Training (Singapore), and Professional Ethics (the Republic of Vietnam).

A comparison of the classified data (a) and (b) shows that the countries under study view student teaching as the culmination of the teacher training programme. This is reflected in their respective teacher training curriculum which lay emphasis on a) the content of the courses (being related to the demands of the teaching situation); b) the necessity of relating theory to practice in the general and professional courses; and c) the provision of practical experiences and guidance to the student teachers in the courses on general and special methods of teaching.

Levels of Study

Comparative studies in education may be conducted at various levels, for example, at the *informative* level, at initial teacher training courses to help the teacher trainee know and understand better his own educational system and those of other countries.[5] In time he learns to deduce from the achievements and mistakes of other educational systems, lessons for his own. He also learns to appraise educational issues from an international rather than an ethnocentric perspective.

Thus at the University of Malaya Faculty of Education an integrated syllabus has been desiged to help the student a) develop a more objective and realistic appraisal of the strength and weaknesses of Malaysian education; b) examine the educational system of selected countries of Southeast Asia (Indonesia, the Philippines, Thailand, Singapore and Malaysia); and c) study the ways in which these countries have experience and dealt with specific problems such as nationalism, human resource development, teacher recruitment and training and adult education.

The course consists not merely of a description of the various systems and how they work but rather each system is assessed in its historical, cultural, economic and political contexts. With this in mind attention is given to the study of the system of education in each country from the historical, philosophical, curriculum and structural perspectives.

Other levels include the problem-analysis[6] (which would be suited to the advanced student preparing for higher degrees), the *inter-disciplinary*[7] (where the student works closely with specialists from other disciplines), and the *committment and decision-making*[8](in which the research-student works in collaboration with educational planners and administrators to inform and advise the Government on matters pertaining to education).

At whatever level it may be, the teaching and research must be closely related to the local dynamics of particular cultural contexts, sensitive to changes, and alert to the different opportunities and responsibilities of education today. In brief, comparative studies in education must be taught, studied and brought to life, with a purpose. Or as Lauwerys puts it: "In the search for solutions to problems, comparative education can aid in two ways, first, by helping us better to understand the nature of the problems and the general principles which can guide us when we seek answers to them It is often said that Comparative Education must compare. Very well – but why? Is it sufficient simply to let the comparisons stand side by side? Evidently not: the aim of comparison is to move towards the statement of general principles. Secondly, by studying what our colleagues in other lands do, we may get ideas helpful in our own national environment – but we shall be able to borrow usefully and constructively only if we understand the basic principles.[9]

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1 Examples of studies in comparative methodology are (a) *Comparative Method in Education*, by George Z.F. Bereday (Holt, Rinehart & Winston, New York, 1964); (b) *Methodology in Comparative Education*, by Lewis Spolton, in Comparative Education, Vol. 4, No. 2, Pergamon Press, Oxford, 1968; and (c) *Toward a Science of Comparative Education*, by Harold J. Noah and Max A. Eckstein (The Macmillan Company, London, 1969).

2 The term "student teaching" is here taken in the widest possible sense to include all the experiences

and practical activities that serve to prepare the student teacher for his various responsibilities as a teacher.

3 A fine example of such studies is the *"Society, Schools and Progress"* Series, published by Pergamon Press, Oxford.

4 Student Teaching Practices in Primary Teacher Training Institutions in Asia, UNESCO, Bangkok, 1969.

5 Examples of such studies are (a) *The Place of Comparative Education in the Training of Teachers* (Proceedings of the Conference of the Comparative Education Society in Europe, University of Reading, September, 1965, edited by P.J. Mercier); (b) *An Introduction to the Study of Comparative Education*, by Vernon Mallinson (Heinemann Educational Books Ltd., London, 1957) and (c) *Tradition and Change in Education – A Comparative Study*, by Andreas M. Kazamias and Byron G. Massialas (Prentice-Hall, Inc., J.J., 1965).

6 An excellent example of this is *Problems in Education – A Comparative Approach*, by Brian Holmes (Routledge and Kegan Paul Ltd., London, 1965). Dr. Holmes suggests how common problems may be analysed and illustrates his methodology in case studies.

7 Thelma Bristow and Brian Holmes give a very comprehensive bibliographic guide to these and other studies on comparative studies in education in their *Comparative Education through the Literature* (Butterworth, London, 1968).

See also *The Inter-Disciplinary Approach to Educational Planning*, by Robert Jacobs, in Comparative Education Review, Vol. 8, No. 1, 1964.

8 Illustrative studies of these are (a) *Comparative Studies and Educational Decision*, by E.J. King (Methuen Educational Ltd., London, 1968) and (b) *Comparative Education Research and the Determinants of Educational Policy* (Proceedings of the Comparative Education Society in Europe, Amsterdam, 1963).

9 In his Opening Address to the Second General Meeting of the Comparative Education Society in Europe, Berlin, June 8th–12th, 1965.

CURRICULUM EVALUATION IN TEACHER EDUCATION IN SOUTH-EAST ASIA – A PEDAGOGICAL PERSPECTIVE

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1. The Pedagogical Elements

There is probably little scope for disagreement on the five basic and ever present elements in the pedagogical situation. Couched as they may be in somewhat differing terms by different writers nevertheless they are always clearly recognizable. Sim's [1] straightforward account as set out in Appendix A, naming them the Teacher, the Pupil(s), the Content, the Objectives and the Environment would no doubt be acceptable to all. Goodlad [2] identifies essentially the same elements when writing on Instructional Decisions, describing them as the Teacher himself, some sense of direction, the learners, the materials and subject matter and adds the necessity of some view of what learning is, while omitting the environment. Even more general descriptions would be Mitzel's [3] Presage, Process and Product factors, again essentially to be identified with Input, Throughput and Output factors.

No one is, however, deceived by the ease with which these elements may be identified. The complexity of each element in itself is well-known and illustrated by discussions in earlier papers, such as the discussion of objectives and summary of Bloom's Taxonomy outlined in the paper by Lynch[4]. To illustrate the problems involved in these elements we might carry this discussion of *objectives,* the first element, a little further.

Within the last decade the most important emphasis and shift in the statement of objectives for teaching has been to the insistence that these should be stated in non-general, specific and behavioral terms. Mager has bluntly stated that "a statement of objective is useful to the extent that it specifies what the learner must be able to do or perform then he is demonstrating his mastery of the objective"[5] He suggests the following questions to assure the clarity and completeness of any statement of objectives: [6]

1. "Does the statement describe what the learner will be doing when he is demonstrating that he has reached the objective?
2. Does the statement describe the important conditions (given or restrictions or both) under which the learner will be expected to demonstrate his competence?
3. Does the statement indicate how the learner will be evaluated? Does it describe at least the lower limit of acceptable performance?"

The emphasis has been largely and enthusiastically adopted, at least by the theorists in pedagogy. Understanding, enjoyment, appreciation have been abandoned in favour of reciting, stating, identifying, listing and so on.

A warning note however has been struck by Smith [7] in listing, as one of the charges against the "quality and scholarly validity of the material presented in many professional education courses" the following:-

"The charge that some teachers are misusing concepts, generalizations, and methods of inquiry in the behavioral sciences which are valid only in terms of the constructs arranged by behavioral scientists in unique experimental situations."

Tyler, while strongly stating the usefulness of many concepts, generalisations and methods of enquiry from the behavioral sciences in providing a basis for understanding learning and teaching, gives the same warning when he says: [8]

" . . . two facts need to be kept in mind. In the first place, behavioral scientists have not generally conducted their studies or formulated their constructs in order to emphasise and guide teaching and learning. In the second place, concepts, generalisations, and methods of enquiry in the behavioral sciences are valid in terms of the logical structure from which they are derived. The prospective teacher will often misuse them if he does not understand what questions they seek to answer and in terms of the ways of conceiving the social reality in which they have been developed . . . Because of the difference in the kinds of question under study the behavioral sciences not only may fail to provide direct answers to the questions of primary concern to the student of education but they may also contribute less in the nature of research findings than they do to the development of conceptualisations useful in thinking about problems of education and in conducting inquiries about these problems, and to the invention of techniques useful in conducting educational enquiries."

In spite of such warnings the emphasis, as I said, has been largely accepted. As Atkin[9] humorously puts it:

"In certain influential circles anyone who confesses to reservations about the use of behaviorally stated objectives for curriculum planning runs the risk of being labeled as the type of individual who would attack the virtues of motherhood. Bumper stickers have appeared at my own institution, and probably at yours, reading STAMP OUT NONBEHAVIORAL OBJECTIVES."

Undaunted by such threats however, Atkin goes on to state several sane, mildly put, and to my mind as yet unanswered reservations about such objectives which could be summarised as follows:-

1. The fundamental problem lies in the easy assumption that we either know or can readily identify the educational objectives for which we strive, and thereafter the educational outcomes that result from our program . . . We are making progress towards thousands of goals in any existing program . . . .

2. Certain types of highly desirable innovations can be hampered and frustrated by early demands for hebavioral statements of objectives,

3. Many important concepts and ideas are pervasive and arise in classroom situations that are unplanned but have powerful potential . . . . Riveting a teacher's attention to a few behavioral goals provides him with blinders that may limit his range.

4. "The behavioral analyst seems to assume that for an objective to be worthwhile, one must have methods of observing progress. But worthwhile goals come first, not our methods for assessing progress toward these goals. Goals are derived from our needs and from our philosophies. They are not and should not be derived primarily from our measures."

Keeping this last fundamental reservation in mind this problem might be summed up by saying that wherever the concepts being dealt with, (particularly in the realms of skills and facts) can be expressed in behavioral terms then this is exactly what should be done but that over emphasis on objectives stated in such terms could well lead to the omission of much that is counted of great value by our society. An illustration of this might be found in Krathwohl's views on the five levels of the affective domain which he sets out as follows:-[10]

1.0 Receiving (Attending)
    1.1 Awareness
    1.2 Willingness to receive
    1.3 Controlled or selected attention.

2.0 Respondng
    2.1 Acquiescence in Responding
    2.2 Willingness to Respond
    2.3 Satisfaction in Response

3.0 Valuing
    3.1 Acceptance of a value
    3.2 Preference of a value
    3.3 Commitment (Conviction)

4.0 Organisation
  4.1 Conceptulization of a value
  4.2 Organisation of a value system

5.0 Characterisation by a Value or Value Complex
  5.1 General Set
  5.2 Characterisation

A mere glance at such a framework meant to be of assistance in the meaningful categorization of teachers' objectives will reveal that from lowest to highest levels it would be virtually impossible to state objectives in this domain in satisfactory behavioral terms.

This then may be taken as one short statement of the complexity in part of one of the elements in the pedagogical situation. Each could well be developed in the same way. The complexity of problems and difficulties is only beginning to be apparent.

2. The Pedagogical Process.

The true heart of pedagogy lies not in the identification of these elements but in their dynamic relationship to each other in the teaching/learning encounter.

Once again the analysis may appear deceptively simple, e.g. Smith[11] in speaking of the teacher's responsibility for organizing the day to day experiences that will lead the students to the knowledge, skills, appreciations expected of them, describes that responsibility as embracing "Setting objectives, arranging the conditions of learning, selecting usable content, employing specialised techniques, measuring the results of instruction". He goes on to quote Robert Bush in the words: "the manner in which a teacher states his aim, how he communicates it to his pupils, the way in which he entices the pupil to accept the aim so that the pupil will be highly motivated to learn, how the content is selected, arranged and presented to the pupil so that intended changes in behavior may be achieved, and how the teacher assesses whether the desired changes have taken place constitute the teaching act."

The teaching act thus emerges as the drawing together of all the elements in the pedagogical situation, every perspective – psychological, developmental, sociological and comparative being taken into account as the teacher, acting as strategist or decision maker selects and implements the particular learning and teaching plans which he feels fit the situation. Once again the complexity of such decision making and implementation defies accurate description. "For since the relationship between teacher and pupil is never a single, fixed, isolated, person-to-person kind of relationship but one which takes place in a social context that varies from school to school, from group to group and from moment to moment there is no possibility of laying down any neat, well defined rules for the close control of learning by individuals."[12] A few examples must suffice as pointers:-

(a) The teacher's selection of aim and strategy will depend heavily on his assessment of *the pupils,* their starting positions and their behaviour. As one element in such an assessment we might consider the contribution from the behavioral sciences to our understanding of the behaviour of small groups. Tyler[13] summarises this as:

A. Most of an individual's life is lived in small groups, family, play group, work group etc.

B. The small group provides the means for meeting many of an individual's basic needs and for developing and reinforcing his values.

C. The behavior of a small group, existing for an ostensible purpose, can be understood as attending both to its ostensible purpose and to the social relations in the group.

D. An individual in a group seeks to identify for himself a role in the group which he thinks he can perform successfully and for which he can obtain recognition.

E. A group works effectively on its ostensible purpose when each individual perceives an appropriate role in attaining this purpose, a role which he thinks he can perform successfully, and the other members of the group recognise this role for him. (Congruence in role perception).

F. Among children and youth the values, attitudes, interests and practices of groups of peers exert a profound influence on individual behavior often greater than the influence of teachers and parents.

Woe betide the teacher who has not learned to take these into account in planning, for we all know the pitfalls (and perhaps can even learn to recognise the opportunities) in the class joker, or the shy fellow whom the others always want to push into the girl's role in sketches, to his own great embarassment, etc. etc. Yet here is only one small part of the understanding which a teacher must be able to draw upon in planning for teaching. The pupil as an individual, the evaluation of his starting level of understanding with regard to the concepts being taught, his background, his abilities all come crowding in with a host of other considerations to this one aspect of the art of planning and deciding.

(b) A second example might be taken from the behavioral sciences in considering *Learning plans* and establishing the conditions for effective learning. Commonly required conditions are set out by Tyler[14] as

(1) Relevant motivation on the part of the learner

(2) Perceptions by the learner of the inadequacy of his presently established behavior patterns

(3) Guidance in identifying more adequate patterns of behavior which he perceives as possible for him to acquire.

(4) A variety of situations available for him to carry on the new behavior

(5) Time for him to practise the new behavior.

(6) Satisfaction for him when the new behavior is successfully carried on

(7) Opportunities available for him to carry on sequential practice of the new behavior, each new opportunity involving elements he recognises as different from previous ones

(8) Standards that he accepts for his behavior that for him are high; that is, they require further learning, and yet he perceives these standards as attainable

(9) Ways that he uses to judge his behavior in terms of these standards.

Again we find we are dealing with one small aspect of the complexity in setting learning plans.

(c) A third example of this complexity could be the matter of *Evaluation.* That a teacher should learn to evaluate his teaching and his pupils' learning in order to improve both is accepted as self evident yet we find that the effecting of such evaluation poses immense problems. It is a well known irony that while teachers are urged to carry out such evaluation of their teaching effectiveness all the results of masses of research on teacher effectiveness have failed to come near producing valid and reliable measures of such effectiveness.

Some progress has however, been made in research in this field e.g. Flander's interaction analysis observes and categorises teacher and student behaviors for every three seconds of the teaching/learning encounter. Such observations are then linked with learning outcomes. The teacher behaviors are categorised as follows

Indirect:– 1. Teacher accepts student's feelings
2. Teacher praises student
3. Teacher accepts or uses student's ideas
4. Teacher asks questions

Direct:– 5. Teacher lectures
6. Teacher gives direction
7. Teacher criticises.

Student behaviors are categorised as either a) predictable student response to teacher question or b) student initiated response, while a final category of behavior is named Miscellaneous e.i. silence or confusion. Many studies using inter-action analysis have suggested that the ratio of indirect to direct elements in teacher behavior does indeed affect achievement and attitudes. Yet, helpful as such studies and findings are, they are plainly not of central importance to the practising teacher.

Even using such a guide, for example, a teacher is forced to establish measurements of learning outcomes to decide whether he has been effective or not and criteria for learning are notoriously difficult to establish. Sim[15] has well asked: "What should we evaluate (if we concentrate on outcomes): pupil's attitudes or achievements, and what kinds and to what extent? Do we consider final scores, gain scores or other adjusted scores, and what kind of adjustment should we make? Do we include retention and for how long; or transfer, and to what type and level of tasks? These are far from unimportant questions, for a teacher in evaluating is constantly faced with such problems as A has learned ten theorems; B has learned five. If I know B to be much weaker than A then which has, in fact, achieved more and for which has my teaching been more effective? How much weaker is B than A?" His measurement tools may very well be the very same learning outcomes which he is trying to evaluate.

The complexity and subjectiveness of the pedagogical process, of which these are a few obvious examples, is therefore something that must be acknowledged and accepted. One is constantly appalled by the naivete of such charges as "research has not validated methods being widely promoted" in pedagogical training. Were this indeed to be set as an absolute requirement little would remain of our education courses or even of our teaching. The pointers of research are welcomed and accepted but in the meantime the teacher must teach. Even if one has adopted as one's faith the assumptions stated by Walton[16].

"The assumption is made that the sciences of medicine and engineering, and the sciences on which they are based, have developed to the point where they are extremely and immediately valuable to the practitioner in performing, controlling, and predicting under the conditions of practice. The further assumption is implicit that we may, expect the study of education, along with the other social sciences, to have a comparable relevance for practice when it becomes truly scientific. These assumptions rise out of an epistemological monism that characterises the age of faith in science." – Even if, as I say, these assumptions are adopted as one's faith the situation, as it is, remains far from that 'ideal' and we are forced to teach and construct curricula for teacher education largely on the basis of observation and experience.

3. The Pedagogical Evaluation

Many pedagogical questions however do arise on the basis of such observation, experience and accepted principles as well as on the basis of research that is being carried out and this final section seeks to raise a few of them.

(a) As an example the question of *objectives* was recently raised very practically in our institution. The setting of objectives, clear and viable, is a demand made of any student teacher for any lesson, and earlier in this paper, the desirability of stating such objectives in specific, behavioral terms, wherever applicable, was restated. Recently a study group was set up by the Senate of the University of Malaya to look into the question of the evaluation and examination system employed here with a view to effecting improvements in validity, reliability, fairness etc. and eliminating, where feasible, unnecessary strain on the students in such assessment. As might be expected the group quickly decided that the first necessity was to have course objectives clearly stated. It immediately became obvious that in many cases such objectives were simply not available and had most probably never been formulated at all. Yet such courses are for the most part, taken as content preparation by prospective teachers. It must be questioned whether even within the field of professional studies such clear objectives have invariably been stated.

(b) *Resources* Taking the teacher himself as the major resource we might ask whether this resource is being adequately stocked up for the encounter that lies ahead of him. The question might be raised about his liberal education, his specialist subject/s, and his professional preparation (Questions of input, initial qualification and aptitude while vitally important cannot be dealt with here.)

1. *Liberal education* The fundamental need of a liberal education for all teachers has long been asserted but seldom implemented. Woodring[17] puts the case well

   > "If he is to make wise independent decisions, the individual must be able to think critically and logically. But even the clearest and most logical thinking will not lead to sound conclusions unless it proceeds from sound premises. The individual must possess a vast amount of accurate information about his world, his culture, and himself. He must have a knowledge of political, social, and economic history because sound decisions in these areas cannot be made without background information of an historical nature. He must know the sciences because many important decisions rest upon a knowledge of the world and of man and much of this information has been accumulated and verified through the scientific method. He must be familiar with great literature because literature offers another approach to knowledge of man and society and because literature deals with values and he must make value judgments. He must know philosophy because all decisions, without exception, rest upon interpretations of reality, of truth, and of value. He must know mathematics because a knowledge of quantities and their relationship is essential to choice. These bodies of knowledge and these intellectual disciplines are not the ultimate end of education, but a grasp of them is essential to that end. Liberal education also requires a stress upon the fullest development of language because it is through language that man communicates with his fellow men and through communication that he achieves his greatest development as a man."

2. *Specialist subject knowledge.* The need for other faculties and departments to work in close harmony with professional educational studies is again apparent but seldom practised. One might well ask whether the course for a mathematician need necessarily be the same as for a teacher of mathematics. In my own field the contrast stands out starkly. Teachers of English come to us with a fine background of literary theory and a more than nodding acquaintance with many writers, ancient and modern. In school however he finds himself concerned with essays, comprehension, speech, reading, remedial work, discussion, the library and a host of other activities (not excluding the teaching of English as a second language) as well as some literature teaching and many peripheral activities such as being in charge of the dramatic society, the debating club and the school library. For most of them his level of resources is no higher than when he last attended school in Form VI.

3. *Professional resources.* While these have perhaps received fuller attention the need for and scope of such studies has been well set out by Goodlad[18]

   > "Specialized knowledge is available to assist in asking and answering the several curriculum questions involved. There are generalizations and methods of inquiry arising out of the field to be studied. Sometimes these arbitrarily determine the principles of sequence to be applied in selecting content, the amount and kinds of student variability that can be readily en-

compassed within an instructional group, and the amount of learning failure or lag that can be carried over into new instructional realms. These kinds of considerations are rarely dealt with in the course sequence of a college major in any field. Similarly, there is knowledge pertaining to learner readiness, concept development, forgetting, individual differences, and much more that can be used to temper decisions that might be made inopportunely on the basis of subject-field knowledge alone. Understanding of what is involved in cognitive, psycho-motor, and effective learning also conditions the selection of topics to be included in any plan of studies.

Study of questions of sequence, scope, principles of organization, and criteria for choosing learning opportunities is not now the recognized business of any conventional field within the college curriculum. The nature of these questions and of the data-sources for dealing with them is, however, the very subject matter of curriculum courses offered in departments of education."

(c) *Conditions for learning.* Curriculum evaluation might well be carried out on the basis of the pedagogical principles set out on conditions for learning earlier. The required perception by a teacher of the inadequacy of his presently established behavior patterns and the ability to perceive "more adequate patterns of behavior which it is possible for him to acquire" implies the ability to analyze the teaching situation and test out each part of it in relation to his measure of success or failure in reaching objectives. The development of such an anlytical skill inevitably leads us to practice teaching in specific teaching situations under the direction of experienced teachers.

While the need for such practice is universally acknowledged its implementation gives rise to many practical pedagogical problems:–

(1) The anxiety factor is undeniably present, and, in some cases, harmfully so. K.G. Collier[19] comments on the acuteness of students' apprehension at the beginning of first practice, the damage to self respect caused by failure, and the great variety of influences leading to improvement in teaching. There is clear evidence that such apprehension is present in exaggerated form and it must be counted most unfortunate that at a time when one would wish the students' attention to be focussed on the analytical process his anxieties are, in fact, centred on the fact of survival and a "pass" in assessment.

(2) There must be some question as to whether practice teaching gives the required variety of situations to enable analysis to become firmly based. Teaching in one or two classes for a few periods can hardly be said to allow for the practical development of alternative teaching strategies. The desire to analyse and give a variety of situations has led to such curriculum innovations such as micro-teaching either being used alongside practice in school or partly replacing practice in school. The variety of simulated situations which can be set up far exceeds any possible school situation though the lack of realism is a negative feature.

Other interesting innovations have been attempted. The Department of Education in the University of Manchester acquired a children's room with a one-way observation screen. Six women and three men students from the primary group "borrowed" a class of 20 children from a nearby primary school and, as a team, planned a programme for them, and carried it through on three days a week for a six week stretch. The variety of situations faced, even with one group of children, in such a set up is obviously greatly increased.

(3) There would seem to be a case for the setting up of situations that allow for the analysis of teaching by students

before teaching practice itself. This can be done through micro teaching but might well be carried out on pure observation by the students either of demonstration or video-taped lessons. R.C. Macmillan[20] describes a program instituted by the Faculty of Education at the University of Natal in which a series of classes was taught before the students in various subjects and situations over an extended period before teaching practice. The lessons were conducted either by the regular and experienced class teachers or by Faculty of Education staff, and were followed by analysis and discussion.

(4) The link with the schools involved in teaching practice has been tenuous and in some cases almost harmful to the practice due to the attitudes of teachers and, occasionally, principals. Giffiths and Moore[21] discovered, amongst other things, that supervision of student teachers by school staff seemed to be vague and uncoordinated. The heads of twelve of the twenty schools involved in the study felt that there was evidence that college courses produce unrealistic teaching, but 19 of the 20 appeared to have no detailed knowledge of the theoretical context of these courses.

(d) *Learning Plans.* Within recent years the cry has been heard for student planned courses. Richard I Miller[22] writing on "Teacher Education and Preparation for the 21st Century" gives as one of his suggestions.

> "Student-planned courses should be included. College students are old enough to fight in Vietnam, to marry, to hold responsible positions, but not to decide what kinds of educational preparation they need. At least this is the implication one draws from the absence of student-planned courses. Students in their junior or senior year could be divided into groups of, say, 25, and asked to develop three-credit hour courses around their areas of interest. Faculty members could help recruit professors around the campus as well as city officials and "open doors" in general."

While we might hesitate to accept, till the 21st Century actually arrives, the setting of course objectives by students there is surely a strong case to be made for giving them considerable voice in the setting of learning plans. Mager and Clark[23] give accounts of some highly suggestive studies in this direction. In one electronics course the students were given complete control of subjects to be discussed and the sequence, demonstrations required and reviews required, while the instructor provided what was requested. It became obvious that not only was the sequence considerably different from an instructor-chosen sequence but a result of this student control was increased motivation.

An even more interesting study was made of an engineering course, normally six months long. Newly graduated engineers went through formal lectures then were passed through the various departments, learning the work of each department. In the experiment the course, as such, was cancelled. The students were told the objectives of the course in detailed written form and were left to plan their own learning in order to reach these objectives being assured that the various departments would cooperate with their requests for information or other help. The results were as follows: "(a) Training time was reduced 65%. All students were personally assigned 6 to 8 weeks after training began. (b) The graduates of this program appeared better equipped than those of previous cycles, demonstrating more confidence and knowledge about manufacturing processes and microwave theory. The manager of the division considered these engineers "better trained" at the time they assumed their permanent responsibility than previously hired engineers. (c) Considerably less time was devoted to training by the instructor, administrators, and technical experts. (d) Content selected for study varied considerably from student to student. (e) The sequence of information studied varied from student to student, but in no case coincided with the sequence used previously." Such results can scarcely be without significance for teacher educators who continually complain of lack of time for their courses yet just as continually fail to take into account individual differences and the amount of starting knowledge in their students; principles which we nevertheless preach fervently to those same students. Such students teach us the same lesson by often (if they are allowed to) ignoring large portions of our courses and yet passing our examinations perfectly successfully.

(e) As a final example we might take the application of *EVALUATION* principles to our program. Cronbach[24] insists that "the greatest service evaluation can perform is to identify aspects of the course where revision is desirable." In such evaluation certain principles become clear, and our own evaluation needs to be evaluated in the light of principles like these:–

1. Outcomes of instruction are multidimensional and it is thus highly misleading to lump many kinds of performance together into one score. Either failure or success in certain aspects can be hidden by such procedures. Only a report that treats outcomes separately can be useful to educators with different systems of values.
2. There is a wide range of methods for evaluation including process studies, proficiency measures, attitude measures and follow-up studies. Cronbach points out that for course evaluation to measure proficiency it makes sense to assign different questions to different students."Giving each student in a population of 500 the same test of 50 questions will provide far less information to the course developer than drawing for each student 50 questions from a pool of, say, 700."

Cohen[25] makes a strong plea for the measurement of attitudes to evaluate course effectiveness since he assures that pedagogical training "is organised to enable (the student) to acquire specific attitudes, beliefs, values and ways of relating to pupils . . . " Many studies have however noted changes of attitude during a course, after teaching practice and at various other points e.g. studies using the MTAI have generally shown increasingly progressive attitudes during the professional course followed by reversals when the student experienced full-time teaching. The "fakeability" of the MTAI has also been well noted, with a strong tendency for students to give answers along the lines for which approval would be expected.

The follow-up study is certainly the most neglected and potentially the most valuable area. Plainly long term outcomes are of greater importance than immediate results yet researchers are constantly noting the dearth of follow-up studies as a means of course evaluation. From the few researchers carried out results are conflicting though a fairly large scale study by Wiseman & Start[26] concludes that "little correlation was found between college assessment and the various criteria of success in the profession."

3. Cronbach also makes the interesting suggestion that in curriculum evaluation we need not be too concerned about making measuring instruments fit the curriculum. This seemingly strange suggestion makes good sense for curriculum evaluation purposes as tests carefully tailored to the curriculum, while they might evaluate the learning and teaching of that curriculum do not provide evaluation of the curriculum itself.

What is needed is an evaluation which measure all the types of proficiency that might reasonably be desired in the area in question. Questions are in many cases "course-specific", i.e. only those who have been through the course can understand what is being asked for because of the way the question is formed. Testing of terminology is something which should be separated from other understandings, which is not to deny the importance, in its place of terminology. Each of these would seem to point to the necessity for external checking of internal tests, if not externally set tests for valid curriculum evaluation.

And so the pedagogical question might continue. To what extent are our curricula enquiry biased? Is independent study an important dimension? To what extent are individual differences catered for? Is there any question of checking on continuous student progress or involving team teaching? To what extent have school subjects been analysed to discover whether "methods" of teaching for different subjects can be stereotyped or need to differ i.e. what assumptions do we make re. knowledge, principles of organization, methods of enquiry etc. for different subjects? To what extent are our curricula integrated, not merely theoretically but to present a coherent view of the pedagogical situation? It is probably in the pedagogical field, the field which we regard peculiarly as "our own", that the most searching reappraisal of our curricula can, and needs to, be made, and that not as a one time appraisal but a continuous process of reevaluation in the light of continually changing input supply and output requirements.

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CURRICULUM EVALUATION IN TEACHER EDUCATION: SOCIOLOGICAL PERSPECTIVE[1]

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Education takes place in time and space. That is a truism; but one that is sometimes lost sight of when educationists get into abstractions. Our time and our world is one of rapid change. Social structures have been overthrown or shaken by sudden political changes, revolutions or attainment of independence. Sometimes it is by the pressure of science and technology; often it is due to a combination of both these causes. Modern economy has created conditions for great occupational and social mobility, so that the job or profession a young man or woman has taken or intends to take up is not necessarily the one that he or she will be obliged to accept a few years later. To take a case in point, when the British decided to withdraw their troops from Singapore many civilians who had held white-collar jobs at the naval base had to retrain for jobs as technicians to fit into a modern industralized Singapore. In a particular profession, the knowledge gained at school or university may become obsolete or inadequate because of a new discovery or application. Again adults have to go to a centre for further training or readaptation. The role of education is therefore changing. The emphasis is not so much on set items of knowledge to be learned as the development of the taste and the ability for continuous learning and the awakening of interest in the world around us. In other words, a well trained head is better than a well filled head, as Montaigne said hundreds of years ago. Education can no longer be considered the prerogative or obligation of young people; it is to be pursued by the adult throughout his active life. For it is only through education that he can achieve the desired variety and flexibility through opportunities and facilities for adding to or bringing up to date the knowledge he has gained.

If education is to play such a role in our world of rapid change, what kind of teachers are needed? What kind of skills and knowledge should they be equipped with? But before answering these questions another recent phenomenon must be briefly referred to. This has been called the "school population explosion" in both developed and developing countries. There is a staggering rise in school enrolment. In the United States of America, since the beginning of this century the number of children attending secondary schools has increased four times more than the number of children of secondary-school age. In India, the number attending elementary school has trebled over the last fifteen years. In Europe, from 1950 to 1965, the enrolment figures for secondary schools rose from 55 per cent to 200 per cent, according to the country. This explosion took the authorities by surprise; the schools were not prepared for it and there was confusion. The effects are still being felt in the shortage of premises, shortage of teachers, overcrowded classrooms, lack of teaching facilities. Teacher education must take cognizance of these effects as well as the wider problems raised by rapid changes in society outside.

If we look at teacher education from the point of view of efficiency and yield, certain questions crop up. To what extent has the teacher shortage affected efficiency and yield in teacher education? In developing countries, at least, it has the effect of lowering entry qualifications and/or reducing the duration of training. These two effects combined with the need to prevent 'wastage' has resulted in teachers who fall short of efficiency with regard both to knowledge of subject content and professional know-how. Logically, the length of teacher training should be in inverse proportion to the entry qualification – the lower the latter the longer the former, in order to provide an opportunity for the would-be teacher to acquire the content of the subject/s he is to teach. But how does one reconcile this to the pressing needs of the educational system?

To return to the question raised earlier: what kind of teachers are needed in the situation broadly delineated above? In other words, what constitutes an efficient teacher in the circumstances or what should be included in the curriculum of teacher education? The teachers that will prove most efficient in a changing milieu will be one who has a command of his subject, but more important still he must have a taste for learning so that he will continue to pursue his subject and be aware of discoveries and changes in theory or application. He will have to be adaptable or flexible in order to be able to meet the needs of the younger generation, the school and society. Assuming he has subject content, we concentrate on professional training. There are four other papers each dealing with one aspect of this training. This paper will deal specifically with the sociological perspective.

In assessing the curriculum, one question one has to answer is why include the sociological perspective? In what way does a sociological perspective increase the efficiency of a teacher? To answer this question, one has to consider a prior question, what is the sociological perspective? As in other disciplines, the perspective includes (a) the persons who have contributed greatly to the field; (b) the basic ideas and themes; (c) the techniques and (d) the topics dealt with. Sociology is the study of people in groups – the influence of groups on the individual and of individuals in groups. The purpose of sociology is to understand people's (and one's own) thoughts and actions by putting them into the perspective gained by knowledge of other people in other groups (neighbouring societies, different social classes, contrasting families, and so forth). Basic concepts in sociology such as society and culture highlight the necessity of knowing what a person's social life is like in order to gain an understanding of his behaviour. In other words, to understand an action requires knowledge of its context. The concept of social norms makes us aware of the values that motivate us and our associates; for it is through social norms that the interpersonal relations of members of a society are controlled and directed, usually without awareness of the persons who are conforming.

If the sociological perspective includes such concepts as outlined in the preceding paragraph as well as others that are essential to an analysis and understanding of the social environment in which the process of education takes place and from which the pupils are drawn, then the inclusion of it in the curriculum of teacher education needs no further justification. In a developing and changing country, such as Malaysia and others in South East Asia, a teacher needs to be aware of the direction of change and the change inhibiting social factors. He will then have the ability to affect the direction of pupil change. His understanding of the social environment will enable him to form a more accurate picture of the teacher's role.

To evaluate the place of the sociological perspective in teacher education is not so difficult as to indicate what topics should be included in the course. A survey was conducted in 1966 among the Sociology of Education Section of the American Sociological Association.[2] Out of 455 members of the section, 126 responded to the questionnaire. These represented 56 colleges and universities. The data provided an empirical definition of the sociology of education, for the respondents were asked to list the major topics they usually covered in the courses. The breakdown of their responses is shown in Table I. They were also to indicate their research projects and the most frequently mentioned ones are listed in Table II.

Since teacher education takes place at different levels, one might consider the following questions in selecting the topics to be included:

1. At what level is the course being taught?
2. What is the duration of the course?
3. To what extent is the topic relevant to the situation in which and for which teacher is being trained? For example, "bureaucratization and education"

TABLE I
RANKING OF TOPICS COVERED IN UNDERGRADUATE, BEGINNING GRADUATE, AND ADVANCED GRADUATE COURSES IN SOCIOLOGY OF EDUCATION

Undergraduates Course Topics	Frequency	Beginning Graduate Course Topics	Frequency	Advanced Graduate Course Topics	Frequency
Social Stratification and Education	15	Social Stratification and Education	18	Comparative Educational Systems	8
Education as an Institution	13	Education of the Culturally Different and Deprived	15	Education of Culturally Different & Deprived	7
Social Structure & Organization	11	The School as a Social System	14	Social Stratification and Education	6
Social Roles & Career Patterns of Teachers	10	Education as a Social Institution	12	Teacher-Student Roles in Education	6
Social and Technological Change and Education	8	Social Control & Education	12	Sociological Methods of Research	4
The School as a Social System	8	Teaching as a Profession	9	School as a Social System	3
The Family's Role in Education	8	Bureaucratization in Education	9	Social and Technological Change and Education	3
Socialisation	6	Social and Technological Change and Education	6	Sociology of Higher Education	3
Social Control & Education	6	Education and Economics	6	Sociology Psychology of Education	3
Bureaucratization and Education	5	Socialization	5	Socialization	2
Power Structure in Education	4	Education is Sociological	5	Teaching as a Profession	2
		Family and the School	3	Field Work in Sociology of Education	2
		Religion and Education	3	Economics and Education	1
				Social Control & Education	1

TABLE II
THE RESPONDENTS' MOST FREQUENTLY MENTIONED RESEARCH PROJECTS

Research Projects	Frequency Mentioned
Research on Higher Education	27
Class, Ethnic, Racial Differences in Education	24
School-Community Relations	7
Research on Teacher Values	6
Organizational Problems in Schools	6
The School as a Social System	4
Role Expectations of Parents and Educators	3
Research on High School Dropouts	3
The History and Extent of Sociology of Education	3
Research on Student-Teacher Relations	3
Education and the Development of Human Resources	3

may be less relevant in the Malaysian situation than "education of the culturally different and deprived", in view of the current interest to bridge the gap between rural and urban populations.

4. To what extent will it sharpen the students' awareness of his role as a teacher?
5. To what extent will it enable him to interact appropriately with his pupils?
6. To what extent will it increase the students' opportunity for creativity?

The course should also provide opportunities for practical applications of the concepts and techniques to build up the sociological perspective. Discussions on "social stratification and education" may be supplemented by field trips so that the student-teachers can see for themselves the conditions of life at different levels. Visits to community facilities may also be included to increase the teacher's awareness of the social factors that impinge on the lives of his pupils. Such first hand experiences will not only enlarge his understanding but also deepen his sympathies and thereby enable him to interact more realistically with his pupils.

Another fruitful application of the theories and techniques would be to involve the students in research and case studies. So little educational sociological research has been done in South East Asia, that any academic exercise on an aspect of school or society would add useful data to verify or disaffirm theories or principles developed in the West. In Malaysia, for instance, much research is needed on social class to discover the criteria for or the defining limits of each class that will enable educational sociologists to make meaningful statements about the relationship between social stratification and aspects of education. Case studies of children at different ages and from different social backgrounds will reveal the different patterns of family interactions, models for language and motivation for learning, which have been shown to affect school learning.[3]

A third useful application of the sociological perspective is the playing of games with simulated environments. In such games the student is no longer a spectator or observer but gets a chance to think himself into a specified environmental situation and is forced to react from the inside as a participant. This ought to increase his understanding of intra-group relationships, which is of value to a teacher.

The foregoing discussion has shown that

the sociological perspective is of value to the teacher because it gives him a knowledge and understanding of the milieu in which he teaches. It follows from this that teacher education should take place within the society in which the teacher is expected to operate. Someone who has received his education and/or teacher training overseas will, from the sociological perspective, be less effective unless and until he adjusts to the local environment. This point needs emphasis in view of the large members of our students abroad. According to newspaper reports[4] there are about 17,000 from Malaysia. Some of these must be prospective teachers.

Methodology of Evaluation

We have so far discussed why the sociological perspective should be a part of the curriculum of teacher education and the content of the sociological perspective. How does one evaluate the curriculum? If we interpret curriculum in the broadest sense to include all the experiences the student undergoes at the school then we have to begin by considering the teacher, the students, the school, the hardware and software as curricular vehicles. The information to be obtained from each of these is part of the inputs for the curriculum. What do we need to know about each?

1. The teacher – (a) his background, (b) his training (c) his personality.
2. The students – (a) their background, (b) their perception of their role, (c) their ability (d) their interests (e) their creativity.
3. The school – (a) its history and status, (b) its internal structure and organisation.
4. The hardware/software – (a) their adequacy, (b) their accessibility, (c) the amount/frequency of use.

These inputs produce certain expectations which may be regarded as the primary effects of the curriculum. We need to evaluate them. What are the self expectations of the teacher and students? What are their expectations of each other? What are their expectations of the school and of society? On the other hand, what do the school and society expect of the teacher and students? What does the school expect of society and vice versa?

These expectations or primary effects in turn lead to secondary effects which call for evaluation. There are three areas of secondary effects: (a) the difference between expectations and actual behaviour or performance, (b) the amount of knowledge gained, and (c) attitude change. With regard to (a) we need to find the difference between expectations and performance for each of the four curricular vehicles mentioned above. The evaluation of (b) is usually the only evaluation of the curriculum that is done and traditionally it is done by means of examinations and assignments. It covers evaluation of the content of the course as set out above. The most difficult area to assess is (c) but it is one of the most important. The difficulty is that an attitude is a way of looking at things and a teacher's attitude to education reflects his philosophy of education. When we talk of attitude change we must have in mind a norm towards which the change is expected. This norm reflects a philosophy too. What is to be this norm? Is it one set up by the teacher, the student, the school or society? If the student holds non-conformist views and the teacher, school or society is committed to the position of self-determination and development of individuality how is the imposition of norms to be justified? How does one evaluate philosophies of education?

What follows is a suggestive scheme for evaluating attitude change and it is hoped there will be some comment and discussion on it at the meeting. There are four stages in the process of evaluation. First the student sets his goals. The teacher evaluates these goals and either accepts or rejects them. If rejected, the student modifies them. If the goals are accepted, the student applies them in teaching. The teacher then evaluates the student's performance and accepts or rejects it. If the teacher rejects the performance, the student tries again.

There are two points at which evaluation takes place. What are the criteria for evaluation? The following criteria are suggested for evaluating student goals:

1. Does the student select and develop a point of view?
2. Is he aware of and does he reject alternative points of view?
3. Do the goals meet the expressed and unexpressed needs of the teacher, school, pupils and society?
4. Do they show awareness of context/ environment/problems?
5. Are they expressed in behavioral terms?
6. Do they advance the field of educational sociology?
7. Do they reveal content knowledge of subject?
8. Lastly, what is the ethical dimension?

The second point at which evaluation takes place is when the student applies the goals in teaching. The expression of a person's goals or point of view may differ from his actions. Hence the necessity to evaluate the student's performance in order to see if change has occurred in reality. The criteria here are:

1. Is the performance consistent with the accepted goals?
2. Does the student show willingness to modity accepted goals?
3. Is there satisfaction by the teacher, pupils, school and society?
4. Is there personal satisfaction?
5. Is there increased awareness of communication?
6. Does the student show creative innovation and research?
7. To what extent is there comprehension and depth of coverage?

Finally, if we recall that education in a changing world must be a continuing process, the ultimate evaluation of any curriculum of teacher education must be in terms of whether it produces teachers capable of adapting to change through continued self-education.

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[1] Paper presented at the "International Conference in Curriculum Evaluation in Teacher Education in South East Asia" held at the Faculty of Education, University of Malaya, 3rd–7th,August, 1970.

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[3] (a) Bernstein, B. Linguisitic Codes, hesitation phenomena and intelligence. *Language and Speech* 1962, 5(1), 31–46.
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[4] Straits Times, Sept. 21, 1969 and Malay Mail, February 1, 1970.

REPORTS OF PANEL & GROUP DISCUSSIONS

Panel Discussion I

1. The main points of the talk by Dr. Chai Hon Chan entitled "Perspectives and Problems in Development Studies" is to be found elsewhere. This Report will therefore confine itself to the salient points arising from the panel discussions and the question-and-answer sessions.

2. The panel agreed on the desirability of teacher training curricula to be development-oriented, aimed at bringing about in our teachers, and through them to our pupils, an increase in knowledge, an increase in vocational-oriented skills and a change in attitudes and values.

3. In the matter of increasing knowledge, some members took to task the tendency to emphasise memory and reproduction of specific facts rather than the understanding of principles and the ability to analyse, synthesise and apply the facts in particular situations. One speaker pointed out that this was due in part to the prevailing examination system and techniques, but that all the same, the Ministry of Education was aware of this, and was looking into the matter. Another speaker stressed that the increase in knowledge should aim at the following:

(a) practical reasoning and not artistic consideration,

(b) self-discovery and not spoon-feeding,

(c) love for knowledge and not memorising in agony,

(d) effective communication and exchange of ideas and not introversion,

(e) broad-mindedness and not prejudiced thinking,

(f) appreciation of others' opinions and not being dogmatic, and,

(g) social etiquette vs personal values.

4. As for increasing vocational-oriented skills, teachers should be able to identify and, develop aptitudes and talents in students. The existing instruments for evaluating teachers' ability to do this, however, were by no means fool-proof, and were not as effective as they appeared to be. Reference was made to evaluating instruments and procedures such as psychological tests, viz.

(a) IQ tests, stimulus-organs-response test, Thematic Apperception Tests,

(b) performance in group activities e.g., sports, debates, etc, and

(c) follow-up studies of positions and status of students as indicators of teacher-effectiveness.

5. A host of specific attitudes and values was mentioned by speakers in taking up what Dr. Chai had described as "the psychological component to development,". One speaker listed the following attitudes:

(a) the scientific attitude – observing, pondering experimenting and testing before arriving at a conclusion,

(b) respect for the individual extending to the right attitude towards blue-collar workers,

(c) cooperativeness, without underplaying individual effort,

(d) right attitude to science and technology,

(e) right attitude to learning,

Another speaker listed the developmental values, thus:

(a) adventurousness,

(b) objective curiosity and enquiring mind,

(c) high achievement motivation,

(d) egalitarianism cum utilitarianism and

(e) rationality versus emotionalism and

(f) multi-racialism.

Yet another speaker referred to the need to heal the prevailing malaise, namely the wrong attitude to labour, previously mentioned, an attitude reinforced by teachers who threatened their pupils, i.e. that if they didn't do well in school, they might well end up frying noodles at a roadside stall. The same speaker stressed two additional points:

(a) the need for teachers to be responsible to their professional growth, and

(b) the need to inculcate a "development mystique" as in an increased respect for the scholar and the intellectual.

Finally another speaker on this topic dwelt on the need to face vital issues, squarely, instead of pretending they didn't exist.

6. The panel also agreed on the necessity for re-defining the role of teachers in the context of the developmental process. The various speakers would have the teacher perform, in addition to his role as instructor, the roles of agent of change, counsellor, guide, friend and philosopher.

7. Other points dwelt on by individual members on the panel included the following:

(a) In developing the curriculum, cognizance should be taken on the time factor. Thus, a change from an emphasis on the arts subjects to one on the sciences and mathematics could not be wrought overnight.

(b) While curricular changes were aimed at students in teacher training colleges and pupils in schools, not enough attention had been paid to parents' and adults' expectations of their children, particularly as to the gulf between these expectations and reality. On this, as in the attitude to manual labour, one might take to heart Gardner's statement that a first-rate plumber is infinitely better than a third-rate philosopher. A Society that tolerates shoddiness in philosophy because philosophy is an exalted calling and scorns excellence in plumbing because plumbing is a humble activity will have neither good philosophy nor good plumbing. Neither its pipes nor its theories will hold water.

(c) The need for a continuing and life-long education.

The comments and questions from the floor following the panel discussion are summarised below:

1. A participant from Malaysia held out a formula representing development as a function of the attitude of the massess and the attitude of managers and administrators rather than the masses whose attitudes and approaches were wrong. Another formula was produced, showing the developmental process as a function of a multiplicity of factors – social, economic, political, cultural, etc. all of which, it was suggested, had to be tackled together on an institutional approach and not piecemeal. It was a problem that could not be solved by educators but by administrators and pupils. A Newtonian law was cited to support his view that progress would follow its own momentum. Dr. Chai, replying, pointed out that problems in developmental economics were not as simple as they sometimes had been made out to be. One had to reckon with a vast array of variables. Hence, while agreeing that certain issues and factors were crucial, one ought to ask what teachers could realistically do?

2. Another participant from Indonesia, acknowledging the importance of changing the attitudes of teachers, posed the question as to

how this might be done, and suggested doing this not only during the preservice training but also as part of continuing education and the developmental process, recognizing, of course, that the teacher tended to be a conservative animal and the classroom a museum. He also questioned the view put out by a panel speaker that it was difficult to change adult attitudes, and instead stressed that bridging the generation gap should be an important concern of educators.

A panel speaker explained how in one respect at least, adult education programmes in Malaysia had not been successful. The newly-enlightened began to ask awkward questions. Better therefore to concentrate on children.

3. A third participant, from the U.S.A., expressed his concern viewing the educational pyramid that characterised the systems in developing countreis, i.e. one with a very broad base and a thin-pointed apex. There was the danger of an imbalance in the output as between the scholarly intellectual, though some of these, admittedly, were creative, and those people who because they were creative and enterprising were impatient and unlikely to set much store by, or obtain good grades, in the school examination system. At least this was so in his observation in the U.S. In any case, in Singapore where he had stayed, one character that impressed him as being a most versatile entrepreneur and one that might be counted on to contribute to economic growth and development was the husband of his amah! And many non-university students might well be so regarded.

4. A delegate from the Philippines was impressed by the fact that students were represented on the discussion panels at this Seminar, and asked to what extent they should be represented on a broader scale in the life of the country. The panel thought that this should be the case and in fact, the trend had already begun. The chairman added that teachers too should obtain a greater participation in the educational and general life of the country.

5. The sole delegate from South Vietnam gave a brief account of the relationship between a Faculty of Pedagogy in that country and 12 pilot high schools.

6. A participant from Thailand expressed his uneasiness about the definition of "development". Was the meaning of "development" generally agreed? Did "development" mean everything? Could education meet both manpower needs and social development? He cited the 3 phases in the development plans in Thailand, in the course of which there had been a shift from a purely economic orientation to one that included social development as well.

7. The last commentator, from Malaysia, dwelt on two points, viz:

   (a) that there had been an improvement in the products of the developmental process – the students – but more important was the desired change in the attitude of administrators, headmaster, managers, among others.

   (b) that it was difficult to bring about changes in adults, but, nevertheless, it could be done, i.e. through demonstration and internship.

Rapporteur: Ee Tiang Hong

Panel Discussion II

This is a brief report on panel discussion dealing with the psychological perspective of curriculum evaluation of teacher education. The panel members were strongly of the opinion that teacher training curriculum should give proper attention to the self-concept of the teacher. The self-concept is the core of personality development and, as such, influences the quality of an individual's behaviour pattern. The self-concept of the teacher will determine to what extent he can interact appropriately with his pupils.

It is generally agreed that the relationship between the teacher and his students are more important for effective learning than the information or knowledge presented and the techniques employed. Although it is widely accepted that the type of a person a teacher is, determines the quality of these relationships, this is the factor which has received least attention in educational planning. It is unfortunate that students for teacher training courses are not selected in terms of their ability to maintain effective interpersonal relationships.

One participant in the discussion suggested that teachers should be well acquainted with the principles of individual differences and their implications for educational practice. One of the most firmly established facts in scientific education is that individuals differ from one another in mental maturity, in patterns of abilities, in level and patterns of school achievement, in interests, in social and emotional adjustment, and in needs for guidance and instruction. Because of the wide range of individual differences among students, every phase of their teaching and learning requires recognition and appraisal of individual differences. The science of psychology has much to offer educators. The problem is how to capitalize the potential contribution.

Another suggestion put forward, was that all teachers should be exposed to principles and procedures of educational testing. One can have no assurance that behavioural changes have taken place as a result of education unless some tests have been applied. Since assessing learning progress is an integral part of the overall teaching-learning process, it is necessary for teachers to develop some degree of competence in this area.

A testing programme involves two interrelated processes: measurement and evaluation. They provide information on the basis of which the child's development can be planned and guided effectively. However, the test scores should not be interpreted as final and final biale indications of all a teacher needs to know about the pupil. Tests serve their function by helping the teacher in three main ways.

1. to determine the pupils' educational needs,
2. to set realistic goals and reorient educational experiences,

and 3. to evaluate his progress towards these goals.

Tests also enable the teacher to assess the effectiveness of his teaching and can be instrumental in promoting his teaching efficiency. A teacher should learn to evaluate his teaching and his pupil's learning in order to improve both.

It was emphasized by some panel members that good teaching cannot violate psychological principles, but from these principles very little can be predicted in the way of teaching strategy. Members of the panel agreed on the point that the knowledge of psychological principles is meant to enrich the teacher's understanding of human behaviour than to provide rules for effective teaching. Such knowledge should help the teacher to decide what to look for and short questions to ask in trying to understand situations encountered in the classroom. Also it can provide guidance in planning and execution of applied research in educational contexts.

It is sincerely hoped that many teachers will experiment with different methods of teaching and then go on to develop new methods of their own.

Rapporteur: Kanka Malick

Panel Discussion III

Initiating the discussion Dr. Francis Wong referred to his paper which outlined: (1) *The purpose or aim of comparative studies* in education. As he saw it comparative studies in education aimed at applying the comparative approach to the study of educational phenomena. Comparison was not an end in itself. Comparison led to classification and the latter to the expression of 'laws'. These studies could compare systems of education in space and time. (2) *The Methodology* of Comparative Studies. The methology of comparative studies would include Area studies which could be descriptive or interpretive. Area studies described the educational system of practices of one particular country. Reports of several countries one after the other were still Area studies until the selected material were analysed so as to bring out the similarities and differences and the findings summed up in a hypothesis. This involved the juxtaposition of the available data leading to classification under convenient headings. Finally came complete comparison through the problems approach or the total analysis approach. (3) *Levels of Study.* Comparative studies in education could be conducted at various levels, for example at the *informative level,* in initial teacher training courses to help the teacher trainees know and understand better their own educational system and those of other countries. Other levels included the *problem analysis,* which would be suited to the advanced student preparing for higher degrees; the *inter-disciplinary,* where the student works closely with specialists from other disciplines; and the *commitment and decision making* level in which the research student works in collaboration with the educational planners and administrators to inform and advise the government on matters pertaining to education.

Dr. Wong further gave a brief historical account of the development of comparative studies. The first phase began in the 19th. Century when European educationists were anxious to borrow from other countries their best practices. It was soon realised that one could not borrow in toto without reference to the social background of the countries. A transitional period followed when backgrounds were studied before importing features of educational systems. The second phase began at the beginning of the 20th. Century when a great interest was shown in society and a variety of disciplines brought to bear upon the study of education systems, e.g. sociology, economics, anthropology etc. Educationists like N. Hans and J. Lauwerys took a global view of education and used interdisciplinary techniques. The third phase began after World War. There has since been attempts to apply the scientific approach to Comparative education as illustrated by the book "Scientific Investigations in Education" by M.A. Eckstein and H.J. Noah.

Dr. Wong proceeded to explain the approach adopted by the Comparative Studies Division of the Faculty of Education. Here it had been considered desirable to offer a course in comparatives studies from four perspectives – the historical, the philosophical, curriculum and structural. Here an attempt was being made to pool the resources of the existing staff to bring about an interdisciplinary approach.

Dr. Wong finally expressed the need for a Centre of Comparative Studies in South-East Asia. It was not important where it was situated but he viewed among its functions the following: (1) the collection of a body of data of fellow south-easian countries. (2) The existence of a team of people to analyse and evaluate problems that could be studies e.g. the implementation of the National Language in various South-East Asian countries. Such a centre would need considerable financial support.

Discussion

During the discussion that followed, panel members focussed attention on the following issues:

1) The Centre for Comparative Studies.
2) The problems facing comparative educationists.
3) The need for studying one's own national system.
4) The emphasis on a multi-disciplinary approach.

5) Fear of becoming too scientific.

6) UNESCO publications.

1) *The Centre for Comparative Studies.* Generally there was support for the idea of a Centre for Comparative Studies in South-East Asia. Mr. Forman of the Asia Foundation thought it an excellent idea and suggested that the University of Malaya with its vast library resources on South-East Asia could logically develop such an institute, drawing in the competent staff in Social Sciences from the different Faculties. Dr. Winarno, of Indonesia, did, however, feel that the first Institute to be set up in South-East Asia should be one of Educational Planning. Mr. Paul Chang emphasised that educational planners used comparative education as one of the techniques available to them. He had himself used the comparative approach to convince the Treasury that a four year education course was viable, since it had been tried fairly successfully in other places.

2) *Problems facing comparative educationists.* Mr. Paul Chang in his comments highlighted the problems facing comparative educationists. There were innumerable dangers in comparing especially by untrained persons who might draw hasty conclusions often leading to disaster. In teacher education for instance, the emphasis is often on the curriculum which in the whole training situation is only the process. Factors of input such as, years of education, duration of teacher training, age of entrance, all of which are important input factors are often ignored. As such it is unfair to compare the output of the process. It is unfair to compare output quality when there are large differences of input quality. Therefore it is important to ensure that what we compare is validly comparable.

3) *The need for studying one's own national system.* Mr. Ngui highlighted the fact that before venturing to compare and study other systems of education one should study one's own national system of education. He saw little use in comparative studies per se. Studies should be utilitarian and done in social, cultural and religious context. In his scale of priorities he would put first Area Studies. Field research studies should be conducted in areas like rural problems. Comparison of similar problems should give insights.

4) *Multi-disciplinary approach.* On the question of the methodology of comparative studies there was widespread agreement that it should be of an interdisciplinary nature. The contributions of Sociology, Economics, and Anthropology etc. were considered necessary to solving problems in comparative education.

5) *Fear of becoming too scientific.* Some fear was expressed by Mr. Forman that comparative education might be aiming to become too scientific. This followed Mr. Paul Chang's and Mr. Ngui's efforts to propagate that comparative educationists should attempt to follow the scientific method and attempt quantification where possible. He thought that comparative education by looking for laws and principles might become pseudo-scientific. Questionsof education were philosophical and one should debate them e.g. What do we want our teachers to be? The emphasis should be on the ends and not the means. Curriculum, for instance, was only the means. We should debate the ends. Mr. Chang, however, felt that there was no danger of comparative education becoming too scientific as it was both a philosophy and a technique. In applying a scientific method one was not overthrowing the philosophy of the subject.

6) *UNESCO Reports.* Dissatisfaction was expressed by Dr. Winarno on the data available in United Nations Reports. This was supported by the Phillipino delegate, Dr. Paz Ramos.

Rapporteur: Mrs. Sarjit Singh

Panel Discussion IV

Theme: Curriculum Evaluation in Teacher Education: Pedagogical Perspective.

Date: August 7, 1970.

In the panel discussion on the pedagogical perspective of Curriculum Evaluation in Teacher Education, the term "pedagogy" is taken to mean the actual practice of classroom teaching rather than the theoretical aspects of teaching such as the theoretical basis underlying the formulation of instructional strategies and the development of instructional theories. The many ideas and arguments put forward by both panel-members and floor-speakers during the deliberation may be broadly classified into three categories. They are:

1. Areas of Agreement,
2. Problem areas, and
3. Suggested Solutions for improvement

Agreement

1. It is of consensus opinion that in any teaching-learning situation the essential elements (or components) involved are the instructional objectives, the teacher, the pupils, the content materials to be taught and the learning environment. These elements need to be examined very carefully during the course of planning a lesson. Statements of instructional objectives are crucial and these objectives must be viable in the sense that they are testable.

2. In the area of lesson-planning, members of the discussion panel agree that the following "steps" should, in general, be considered:

   a. The statement of aims/objectives.

   b. The systematic selection and organization of content materials.

   c. The formulation of instructional strategies to be employed during the conduct of the lesson.

   d. The formulation of questions to be asked and the selection of testing procedures for the purpose of evaluation.

3. Teaching is a highly subjective process. It is the consensus opinion of the panel that until more sophisticated methods and techniques of quantification of the variables involved are found, it is not possible for the teacher to be fully objective in the planning and conduct of his lesson. Similarly, therefore, there is also no objective way of evaluating the performance of the teacher.

4. Everyone agrees that there is a great variety of teaching-learning situations. Because of this complexity, it is therefore essential to provide student-teachers with a wide range of instructional "options" so as to enable them to cope with the many different classroom situations and problems that may confront them.

Problem

1. Even though it is recognized that the statement of instructional objectives is crucial, members of the panel cannot agree on the specific manner in which objectives should be formulated. While some maintain that instructional objectives should be stated in behavioural terms, others claim that there is no real value in insisting on behavioural objectives because it is just not possible to state everything in terms of students' performance – especially for those philosophical aspects of teaching.

2. As the formulation of instructional objectives is by itself a problem area, there is therefore correspondingly no agreement on the specifics of exactly how to plan a lesson in terms of the four broad steps indicated earlier. Neither is there an agreement on exactly how a lesson should be conducted in any given situation. As such, there is therefore no adequate means of assessing and evaluating objectively the performance of a student-teacher in his practical teaching.

3. Some panel members claim that teaching is an Art, while others maintain that it is a Science. Those who argue that teaching is an Art-form warn that we are actually trapping ourselves if we accept teaching as a Science with a rigid structure or system.

4. Practising teachers and students participating in the discussion criticise the system of teacher-training in Malaysia as being too heavily theory oriented. They accuse educators and staff of teacher-training institutions for not practising what they preach. For example, educators recognize, accept and preach the existence of individual differences, but in their teaching, they themselves have done nothing to cater for individual differences among their students.

5. From the view-point of teacher-trainers, facilities for carrying out practical teaching by their students are rather limited in Kuala Lumpur (Malaysia). This is so because there are too many teacher-training institutions being located in the city.

6. Complaints have also come from heads of schools and practising teachers that the existing system of teacher-training in Malaysia has not provided students with any form of training in the area of classroom administration. As such, newly qualified teachers are confronted with many administrative problems in the form of fees-collection, maintaining pupils' records and class registers, etc. which they know very little during their first few months of actual teaching in the schools.

7. Many of the problems confronting teacher-educators arise from the indifferent (if not negative) attitudes of some students towards the teaching profession. To inculcate the so-called "proper" attitude in the students and to help them develop a sense of dedication for the teaching profession under the existing system is practically an impossible task. There may be no solution to this problem unless some form of control to prevent people who intend to take up teaching as "a last resort" from being admitted to teacher-training institutions. Until such a control is being implemented, little can be done to bring about any form of attitude-change in the students (and subsequently of trained teachers) towards the teaching profession.

Suggested Solution

1. As a compromise to the issue concerning whether instructional objectives should be stated in behavioural or non-behavioural terms, certain members of the panel suggest that we should accept both types of objective so long as they indicate what the teacher wishes to accomplish and that the objectives stated are viable.

2. In the area of evaluation of practical teaching, a panel member recommends that instead of awarding a one "letter" overall grade to indicate the level of performance of the student, statements explaining both the strong and weak points of his ability to perform in a given situation may be more useful. Since the students are trained in several areas, continuous evaluation is therefore crucial.

3. As there is no one way of planning a lesson, students participating in the discussion call for the involvement of lecturing-staff in examining the teaching situation together with the students as well as in the joint planning of lessons to be taught. They also suggest that the training program should be geared to the actual teaching problems in the schools and that students should be allowed a say in the planning of the teacher-training curriculum.

4. There is a suggestion put forward by the lecturing-staff of teachers' training colleges that the supervision of students in their practical teaching be left to the senior-teachers in the schools. This would then release the lecturing-staff of the load of having to supervise all the students assigned to them. More time could then be spent in working with those students who are really weak.

5. In order to produce "better-trained" teachers, there is a suggestion from a member of the Faculty of Education, University of Malaya, that the entry qualifications for student-teachers be raised, and if this is not possible, then the length of time of the training period should be increased so that the program need not be so crammed – and the students would consequently be more adequately trained.

6. To enable the students to familiarlize themselves with the wide range of pedagogical problems, members of the panel have recommended the pre-exposure of students to actual teaching situations in the schools for a period of about four weeks. This may

be desirable because in doing so the students would have been exposed to actual teaching experiences right from the beginning of their training and would therefore be able to better understand and react more positively to the many problems they might encounter during their training.

During the discussion several members of the panel have stressed the need for educators to design teacher-training programs that would produce teachers who are "human" and "creative" rather than rigid and stereotype. The degree to which teacher-educators could really succeed in creating teachers who are "creative-feeling" human beings will never be known unless and until the above suggested recommendations are being tried out.

Rapporteur: K.C.Lau

Panel Discussion V

I shall be as brief as possible. This is the report of panel discussion five. The discussion was based on the paper prepared by Dr. Lim Kiat Boey and Dr. Paul Pedersen of the Faculty. The paper entitled "Curriculum Evaluation in Teacher Education: a Sociological Perspective" highlighted the following: a) that the world is in a state of rapid change and therefore education should be continuous. b) In this context, what kind of teachers do we need? Reference was made to developing countries which were wrestling with the problem of quality versus quantity. c) The paper continued that efficient teachers are those who will have a command of their subjects and a taste for continuous learning. They should be adaptable and flexible.

The paper asked why the sociological perspective and it answered that it is essential to an analysis and understanding of the social environment in which the process of education takes place. In Malaysia, the teacher has to be aware of the direction of change and the change inhibiting social factors. Then the teacher will have the ability to affect the direction of his pupils. The sociological perspective will also provide a better understanding of the teacher's role in society.

The paper further added that there should be a course which should provide opportunities for practical applications of concepts and techniques to build up the sociological perspective. In the methodology of evaluation both the authors of the paper stressed the importance of evaluating the four areas. They are: the teacher, the students, the school and the hardware and the software. The paper also raised several questions regrading attitude change which were taken up in the discussion.

After the paper the panel members commented. The first comment was from Dr. Ages Salim from the Department of National Unity. He made two important points. One, he applauded the idea of employing self education and continuing education. He reiterated that the University in general and the Faculty of Education in particular should instill in the students an appetite for learning. Secondly, he said that the student teachers should be made aware of social problems of Malaysian society. He suggested that this could be done through having a course of study on Malaysian society and making teachers stay in rural, estate and other communities during teaching practice.

The second comment was from Mrs. Mona Sedky who dealt more on attitude change. She wondered whether it was our recruiting method that brought in rigid personalities who are not so willing to innovate. She suggested that other than the academic criterion to be looked into to bring in more dynamic and flexible personalities.

Paul Pedersen highlighted the difficulties of evaluating the perceptions and norms of students, teachers, school and society. A student member on the panel Mr. Yoong Suan said that the content of our education system is very much alien. Hence students do not understand local cultures. He also pointed out that the diploma course is taken by many students as a career of last resort.

Many interesting comments were made from the floor. Some time was spent on the problems of attitude change. One member who has done some research in Malaysia made the distinction between the attitudes that are functional and the attitudes that are excessible to change. Another member pointed out that not all attitudes need changing. That there are many attitudes that should not be changed. When talking about attitude change one should not talk in absolute terms.

Another member from the Department of National Unity acknowledged the difficulties in its area but said that a start should be made somewhere and the school was a good place as anywhere else. He also asked whether the student teachers are aware of the social, religious, cultural habits of the children that they were going to teach.

A Singapore example was quoted by a participant as how they are tackling the problem of teacher education by including in their curriculum civics, international relations etc which sensitised the teacher to the existing sociological problems.

Another member suggested the use of simulation games in teacher education. In fact many spoke in favour of simulation games.

The member from Thailand pointed out that in his experience they have not been very successful in inculcating a right attitude in the teachers towards the teaching profession. He also wondered whether they were giving the right courses to the teachers.

Finally a student moaned about conflicting objectives of the Faculty and the outside Society and that they have become victims of this conflict and wondered what sort of a teacher he was going to be!

Rapporteur: T. Marimuthu

Group Discussion A

The group which discusses the curriculum evaluation in language teacher education seeks to answer three questions. These questions have been formulated by the group Chairman M.B. Owen, not T. Owen, of Regional Language Centre, Singapore on the basis of the suggested questions for the group discussion. The questions are:

i) What are the objectives of language teacher education?

ii) Are these objectives different from, or similar to, the objectives of the school?

iii) What evaluative measures can be used to determine whether or not these objectives are met?

It was pointed out that the objectives in language teacher education in various countries would probably differ. So representatives from Thailand, Malaysia and Singapore who were in the group were requested to give brief outlines of these objectives. Representatives from Philippines and Indonesia did not participate in this group discussion.+

In Thailand, language teacher education curriculum consists of two parts: namely language skills and literature. For language skills the objectives are:

i) To train students so that they are able to comprehend what they read or write and to express their views orally or in written form.

ii) To help students so that they may be able to teach the language skills to their pupils.

For literature the objective is to enable the students to appreciate literature. It was given very broadly because the representative concerned was not directly involved in language teacher education.

The objectives of language teacher education in Malaysia are the following:

i) To train students so that they become proficient in the languages they would be teaching.

ii) To train them so that they may be able to teach the language skills. Literature is, however, treated separately. The speaker did not elaborate this piont.

In Singapore the curriculum of language teacher education is divided into two parts. The first part is called the content courses and the second part, the methodology courses. Content courses are provided so that these teacher trainees would be familiar with the patterns and structure of the second language and methodology courses are provided so that they would have the knowledge on how to teach the language to the pupils.

With regard to the next question, the group feels that the expectations of the school differ from the objectives of the language teacher education. In the old days the school expects that every teacher be able to teach English language but now a language teacher, that is the English language teacher, is a specialist. Therefore not everyone should be able to teach English, but this year, Malay language teachers are not specialists in this sense. Malay language could be taught by any teacher who has some knowledge of Malay at least at the primary level.

The group then digressed a little at this point and some of the issues brought to light are the following:

1. In Thailand different languages are taught at different levels. Thai language is taught at the primary level, English language, at the secondary level and during the last two years of the secondary education, German, French, or Chinese languages are taught but most students, however, choose French.

2. There is a general agreement that the methods of teaching language as first and second are different and that the teacher should have a good knowledge of the structure of the language, he or she is teaching.

3. There is a suggestion, that in Malaysia, only Bahasa Malaysia should be taught at primary level if the aim is to provide language skills. English could be introduced at secondary level because less people in this country would require the knowledge of English for specific purposes. The Chairman concluded the discussion on this matter by saying that there is a general agreement that there is disagreement.

The group then discussed the ways and means to overcome the problems that now exist in language teacher education. Suggestions from members of the group indicated that:

a) language teachers should be bilingual.

b) language teachers should be able to teach confidently each of the languages he knows either as the first or second language.

c) language teachers should be able to adapt his approach and materials according to the needs of the class.

d) there is need to reorientate the headmasters and headmistresses so that they may accommodate the objectives of the language teacher training curriculum. It was observed that at present there is difficulty experienced by the language teachers in schools because most of the new methods that they wish to try out in schools do not meet with the approval of some headmasters/headmistresses because it is thought the headmasters/headmistresses are not very familiar with some of these new methods.

e) Examination is perceived as a stumbling block in the way of the school to accommodate these new objectives,

f) finally the group felt that there is a need for experimental school which could be used for experimenting new methods and approaches and these new methods could then be observed by teachers around the area so that they would really see the benefits and the usefulness of these new projects.

Coming next to the third question – the evaluative measures concerned with evaluating teacher education. These measures have been discussed very briefly because very little time was available for this question. So I will give you the measures that had been suggested. These measures are course work, examinations, practice teaching, questionnaires, interviews, observations, testing and evaluation by senior teachers.

The Chairman in his conclusion stated that there are no easy solutions to the problems put forward in the discussion.

Rapporteur: Amir bin Awang

+ They participated in the other group discussions, which were held at the same time.

Group Discussion B

During the group discussion session on 'Curriculum Evaluation in Science Studies Teacher Education' some of the practices of teacher education institutions and problems therein were discussed. It was apparent that our expectations of our science and mathematics teacher is that he be able to function as effectively as he possibly can within the system as it presently exists. That is, within such constraints as large classes, the policy setup, syllabi to be covered, lack of equipment and facilities and the like. Two separate viewpoints on what the role of the science and mathematics teacher should be were expressed and discussed. On the one hand, the role is one of dissemination of knowledge while incorporating new knowledge discovered from time to time and on the other hand, it is one of developing in pupils the habits of scientific inquiry and critical thinking. It was felt that both are desired roles and the teacher should be expected to perform both roles.

With regard to the qualities that a science and mathematics teacher should have, it was agreed that ideally, a teacher should have both academic competency and the 'proper' attitude. However, the group felt that of the two, the attitude of the teacher towards the job was a more fundamental consideration. Inadequacy in subject matter, it was thought, could be made up by the individual teacher who has the 'right' attitude, using materials made available to him.

The group realised that changes in school science teaching need to be made but it was emphasized that one must be realistic and take into account the time element. Any sort of reform takes time. In addition, it was stressed that these changes must reflect changes in society. In order to bring about these changes effectively it was thought that the educational administrator in the school system should be involved in the new programmes. Further, in the teacher training institutions, teacher trainees should be given actual experiences in the use of new teaching materials and new teaching approaches or methods. The teacher training institution should also provide training in the production and utilization of simple and inexpensive apparatus and other instructional materials. It was recognised that teacher training institutions cannot provide all the experiences and skills that are required by a teacher. The teacher training institutions are, in fact, teacher-starting institutions and can only be expected to provide the foundation on which the teacher builds and grows and becomes experienced on the job.

Rapporteur: S. Kanagasabai

Group Discussion C

I present the report of group discussion C on curriculum evaluation in social studies teacher education. The tone of the discussion was set by the Chairman who wrote on the board, a quotation from Confucius, "if words are not properly defined then confusion rather than clarity will emerge from any dialogue or discussion." It was held that it was possible to take two approaches. 1. A broad monolistic approach covering the entire field of sociology. The other approach which appeared to be more common in our schools is that of treating social studies in terms of certain subject areas such as history, geography, civics, economics, political science and anthropology. It was pointed out by one speaker that in Malaysia at any rate social studies were being taught on a fragmented basis and that the need for integration was all too evident. Then the Chariman pointed out that teacher training institutions had the responsibility not only in training their student teachers how to teach but also how to develop and to renew their curriculum. One speaker insisted that the group should set about defining the aims that had to be borne in mind in the teaching of social studies. Although this request was not recognised and accepted immediately, later on at the Chairman's request this speaker did in fact put forward two particular aims for social studies. The first aim is to develop good citizenship by which the school would turn out individuals who are rational, well-informed and able to make sensible decisions. The second is to assist the pupil to acquire factual knowledge of various disciplines such as history, geography, civics and so on. However the mere conveyance or imbibing of knowledge was not to be an aim in itself. Interpretation of the facts or subject matter was the more difficult aspect of this. The delegate from Thailand reported on certain problems in his country. He mentioned that the drawback in the teaching of civics was that it included so many topics that many teachers were reluctant to handle the teaching of it. Because of this fact, the individual approach had been rather more difficult and he also expressed doubts as to whether it was possible for experts in various disciplines to agree on integration. It was often much too difficult to expect five different experts on five different fields to arrive at any particular consensus. Another speaker suggested that probably if University education is organised not on a faculty basis but in the form of schools dealing with area topics as such rather than subjects there might be a greater likelihood of success. Discussion then centred on what the social studies areas should be geared to try to achieve and in this connection various speakers pointed out the inevitability of stressing national ideals and national ideologies. Ethics and civic duties would inevitably loom large in any curriculum of this nature. The delegate from Indonesia pointed out that his country's experience had been that teachers still tend to follow the traditional approach, to look upon social studies in terms of compartmentalized subjects and they were reluctant to apply the integrated approach. Some time was then spent in discussing the suggestion of one speaker that it was not possible to develop citizenship through the teaching of civics alone. It was the general consensus that although there is no certainty that in fact the teaching of civics has led to better citizenship attitudes, the schools of necessity had to fall back on a blend between theory and practice in the achievement of the civic disciplines and values. Inevitably the examination system and its evils crept into the discussion. It was stressed by one speaker that there was no harm in being truthful about it and admit that the passing of examinations was certainly an important objective of education in our schools. What was probably wrong or defective was the mode of examining, which needed reform. All too often the way the examination questions were set out, one got the impression that it was merely intended to test simple recall of facts neglecting the broader educational objectives of critical and analytical thinking. Discussion then ranged on where integration should begin namely whether it should be left towards the end of the syllabus or whether it was better to begin with different subjects and then go on to integration. The programme of the Faculty of Education this year which has introduced a new approach to social science methodology was then discussed. The core and individual areas of the faculty's social science methodological course were analyzed. Finally the Chairman summed up the entire discussion by pointing out that common to all disciplines in the school curriculum is that of being clear on one objective. He suggested that one should be aware of problems and then apply various disciplines in the solution of these problems. He also stressed that the teacher training institutions are the ones that produce the future administrators and decisionmakers in the educational field. Teachers therefore need to broaden their outlook and to be aware that there are more things in heaven and on earth than are dreamt of in their philosophy. Thus the discussion group came back to full circle with the philosophical note on which it began.

Rapporteur: J.P. Doraisamy